March 1974 Number 355-Part 1 Data for February 1974–January 1974

Solar-Geophysical Data prompt reports

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Solar - Geophysical Data

NO. 355 MARCH 1974

Part I (Prompt Reports)

DATA FOR
FEBRUARY 1974
JANUARY 1974

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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* * * * *

To standardize referencing these reports in the open literature, the following format is recommended:

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA SERVICE
National Geophysical and Solar-Terrestrial
Data Center
Boulder, Colorado 80302

Errata to *Solar-Geophysical Data, Descriptive Text*,
Number 354 (Supplement), February 1974.

It has been called to our attention that the "Remarks" for the Solar Flares in *Solar-Geophysical Data (SGD)* did not agree in all cases with the "Remarks" as published in the *International Astronomical Union Quarterly Bulletin on Solar Activity (QBSA)*. The SGD version was abridged from translation of the French text, and the translations for "A" and "H" were found to contain errors as well. Immediately below will be found a replacement table for page 9 of the *SGD Descriptive Text* giving "Remarks" comparable to *QBSA*. The same table will appear monthly with the data.

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked assymetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

Other minor errata are:

Page 16, 3rd paragraph, line 2: should read "David" not "Davis".
Page 16, 8th paragraph, line 2: delete the sentence beginning "The pass...".
Page 65, last name should be "Kroehl" not "Kroel".

Please report any other errata discovered to the NGSDC.

SOLAR - GEOPHYSICAL DATA

No. 355

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

FEBRUARY 1974

FEB. 1974	TIME OF ISSUE UT	ALERT
01	0300	GEOALERT WWA032 010300Z 91231 10000 20730 30090 40140 SPOTNIL 80601 77772 SOLQUIET MAGQUIET
02	0300	GEOALERT WWA033 020300Z 91201 10111 20720 30090 40000 46116 00000 80602 77773 46116 QUIET SOLQUIET MAGQUIET
03	0300	GEOALERT WWA034 030300Z 91202 10121 20750 30070 40000 21905 00000 80603 77773 21905 QUIET SOLQUIET MAGQUIET
04	0300	GEOALERT WWA035 040300Z 91203 10130 20750 30080 40000 20805 00000 80604 77773 20805 QUIET SOLQUIET MAGQUIET
05	0300	GEOALERT WWA036 050300Z 91204 10000 20750 30060 40000 NO FLARES OBSERVED 80605 77773 SPOTNIL SOLQUIET MAGQUIET
06	0300	GEOALERT WWA037 060300Z 91205 10000 20760 30040 40090 SPOTNIL 80606 77772 SOLQUIET MAGQUIET
07	0300	GEOALERT WWA038 070300Z 91206 10000 20770 30040 49920 SPOTNIL 80607 77772 SOLQUIET MAGQUIET
08	0300	GEOALERT WWA039 080300Z 91207 10121 20790 30050 40060 17507 00000 80608 77772 17507 QUIET SOLQUIET MAGQUIET
09	0300	GEOALERT WWA040 090300Z 91208 10251 20810 30040 40000 16009 00000 27017 03000 80609 77773 16009 QUIET 27017 QUIET SOLQUIET MAGQUIET
10	0300	GEOALERT WWA041 100300Z 91209 10310 20830 30020 40000 14208 00000 25617 01010 80610 77773 14208 QUIET 25617 QUIET SOLQUIET MAGALERT MINOR 11/15
11	0300	GEOALERT WWA042 110300Z 91210 10330 20830 30080 40000 13008 01000 24318 02000 A MINOR MAGNETIC DISTURBANCE BEGAN 10/2030Z DISTURBANCE IS WELL BELOW STORM LEVEL 80611 77773 13008 QUIET 24318 QUIET SOLQUIET MAGALERT MINOR 12/15
12	0300	GEOALERT WWA043 120300Z 91211 10170 20800 30222 40000 22917 02000 MINOR MAGSTORM BEGAN 10/20XX 80612 77773 22917 QUIET SOLQUIET MAGALERT 13/15
13	0300	GEOALERT WWA044 130300Z 91212 10502 20780 30292 40110 21617 01000 28216 00000 31213 00000 44607 01000 80613 77772 ALL GROUPS QUIET SOLQUIET MAGALERT MINOR 13/15
14	0300	GEOALERT WWA045 140300Z 91213 10531 20790 30131 4XXXX 20217 01000 26718 01000 32413 00000 31109 00000 MINOR MAGSTORM ENDS 13/1200Z 80614 77772 ALL THE GROUPS QUIET SOLQUIET MAGNIL
15	0300	GEOALERT WWA046 150300Z 91214 10220 20780 30110 40000 31216 00000 25317 00000 33713 04000 80615 77772 ALL THE GROUPS QUIET SOLQUIET MAGQUIET
16	0300	GEOALERT WWA047 160300Z 91215 10561 20861 30020 40000 32217 00000 34017 00000 35513 02010 22919 01000 80616 77772 32217 QUIET 34017 QUIET 35513 QUIET 22919 QUIET SOLQUIET MAGQUIET
17	0300	GEOALERT WWA048 170300Z 91216 10570 20870 30050 40000 34117 00000 22518 00000 37214 04000 21319 01000 80617 77773 34117 QUIET 22518 QUIET 37214 ERUPTIVE 21319 QUIET SOLQUIET MAGQUIET
18	0300	GEOALERT WWA049 180300Z 91217 11071 20880 30080 40000 35417 02000 21319 00000 38013 00000 30018 02000 32307 00000 80618 77772 35417 QUIET 21319 QUIET 38013 QUIET 30018 QUIET 32307 QUIET SOLQUIET MAGQUIET
19	0300	GEOALERT WWA050 190300Z 91218 10590 20900 30020 40000 36817 04000 30119 00000 31518 03000 80619 77773 36817 QUIET 30119 QUIET 31518 QUIET SOLQUIET MAGQUIET
20	0300	GEOALERT WWA051 200300Z 91219 10480 20840 30070 40040 38116 00000 31419 00000 32618 03000 80620 77773 32618 ERUPTIVE OTHER GROUPS QUIET SOLQUIET MAGQUIET
21	0300	GEOALERT WWA052 210300Z 91220 10510 20840 30080 40080 32817 00000 33917 05000 80621 77773 33917 ERUPTIVE 32817 QUIET SOLQUIET MAGALERT MINOR 21/24
22	0300	GEOALERT WWA053 220300Z 91221 10410 20840 30200 40110 34219 00000 35418 10000 33816 00000 80622 77773 35418 ERUPTIVE 34219 QUIET 33816 QUIET SOLQUIET MAGALERT MINOR 22/24

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

FEBRUARY 1974

FEB. 1974	TIME OF ISSUE UT	ALERT
23	0300	GEOALERT WWA054 230300Z 91222 10330 20840 30110 40000 36718 01000 35117 00000 80623 77773 36718 QUIET 35117 QUIET SOLQUIET MAGALERT MINOR 23/24 STRATWARM EXISTS WESTERN HEMISPHERE MODERATE WARMING DEVELOPING OVER CENTRAL SIBERIA TO ALASKAN ARCTIC. POSSIBILITY EXISTS FOR SIGNIFICANT DEVELOPMENTS.
24	0300	GEOALERT WWA055 240300Z 91223 10411 20860 30226 40000 37918 00000 36516 04000 15612 03000 MINOR GEOMAGNETIC STORM BEGAN 22/21XXZ. DISTURBANCE WILL CONTINUE MINOR NEXT 24 HOURS. 80624 77772 37918 QUIET 36516 QUIET 15612 QUIET SOLQUIET MAGALERT 24/25
25	0300	GEOALERT WWA056 250300Z 91224 10350 20830 30212 40000 39018 02000 37816 05000 14212 00000 MINOR MAGNETIC DISTURBANCE CONTINUES. 80625 77773 39018 QUIET 37816 QUIET 14212 QUIET SOLQUIET MAGALERT 25
26	0300	GEOALERT WWA057 260300Z 91225 10110 20800 30272 40000 39016 06200 MINOR GEOMAGNETIC DISTURBANCE CONTINUES 80626 77773 39016 QUIET SOLQUIET MAGALERT 26 STRATWARM ALERT/TUESDAY/STRATWARM HAS INTENSIFIED IN EAST CENTRAL SIBERIA WITH 10 MB TEMPS NEAR 0 DEGREES C. POSSIBLE POLEWARD MOVEMENT OF WARM SYSTEM BEING MONITORED.
27	0300	GEOALERT WWA058 270300Z 91226 10362 20780 30202 40460 11212 00000 13208 00000 16204 01000 80627 77773 ALL THE GROUPS QUIET SOLQUIET MAGALERT MINOR 26/27 STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS NORTHERN SIBERIA MOVING TOWARD POLE.
28	0300	GEOALERT WWA059 280300Z 91227 10531 20780 30121 40410 11808 00000 15005 01000 10912 00000 80628 77773 ALL THE GROUPS QUIET STRATWARM ALERT/THURSDAY/STRATWARM EXISTS SIBERIAN ARCTIC AT 10 MB WITH 30 MB WARMING OVER EAST-CENTRAL SIBERIA.SOLQUIET MAGNIL

RELATIVE SUNSPOT NUMBERS

ZURICH, R_z

	1973 FINAL												1974 PROVISIONAL	
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
1	45	14	40	65	24	8	29	36	89	68	31	46	18	13
2	53	17	38	79	46	8	31	28	124	66	33	24	15	12
3	61	22	35	93	64	16	39	21	130	52	23	24	13	8
4	66	21	32	93	77	14	32	26	121	50	20	0	12	7
5	74	41	22	75	92	7	42	34	108	44	7	0	8	0
6	83	32	32	75	68	16	56	40	84	38	0	0	0	0
7	66	34	38	76	82	37	57	42	77	30	0	0	0	8
8	62	53	50	71	52	41	50	40	72	22	0	7	29	16
9	67	60	53	85	30	31	38	38	75	23	0	8	36	22
10	58	61	67	65	25	38	32	27	58	8	0	16	44	21
11	52	59	69	52	26	60	23	23	42	0	7	9	49	21
12	32	88	85	46	18	58	14	0	22	0	0	9	60	36
13	32	83	93	41	7	52	15	0	0	8	9	8	45	50
14	20	85	83	37	7	54	10	0	0	10	11	8	74	26
15	16	74	73	35	25	48	16	0	13	16	12	17	77	46
16	11	54	64	29	33	45	9	0	26	18	13	26	64	48
17	27	40	52	16	34	36	28	0	20	19	16	40	65	47
18	42	28	44	15	41	18	42	7	16	15	16	43	52	46
19	47	18	38	30	42	38	23	7	8	0	22	41	58	45
20	68	30	23	37	46	51	8	7	30	0	16	47	49	43
21	62	31	20	45	52	75	8	15	39	0	23	51	37	37
22	62	32	30	62	56	66	14	10	48	16	29	51	36	45
23	60	37	37	73	47	54	0	17	58	28	39	47	28	35
24	50	42	29	71	57	51	9	22	63	36	38	51	16	29
25	39	44	27	67	64	49	14	28	74	53	46	53	8	17
26	27	37	23	67	49	46	8	38	78	59	62	57	8	20
27	14	36	32	65	51	43	9	37	78	53	60	26	0	42
28	14	36	43	60	32	42	10	47	80	62	61	12	8	35
29	13		46	54	29	51	17	56	75	65	64	8	7	
30	16		50	42	21	33	11	64	71	55	59	0	0	
31	14		59		17		22	82		37		8	0	
MEAN	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	29.3	27.7

1973 yearly mean = 38.0

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1973										1974	
DAY	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
1	99.5	115.0	111.9*	85.2	90.9	86.9	114.9	109.0	87.0	86.9	71.5	71.8
2	101.6*	118.1*	115.0*	83.1	93.1	86.8	129.2*	106.1	83.9	86.3	73.2	73.1
3	97.8*	129.4	117.3	81.5	93.5	85.0	136.5	103.5	81.1	82.7	73.3	73.1
4	96.6	122.3	115.9*	81.0	94.9	86.2	135.0*	94.9	77.4	78.6	72.5	72.9
5	94.8	117.7	115.0*	82.0	97.9	85.1	135.1*	90.6*	73.9	73.6	72.1	74.0
6	98.9	112.7*	109.7	85.1	99.4	88.8	130.9	85.9	73.2	70.9	74.7	75.4
7	92.2	110.3	103.4	85.3	99.9	90.8	121.7*	82.2	72.1	70.4	76.0	77.4
8	98.9*	121.0	100.0	87.4	97.6*	87.5	115.7	80.1	70.4	70.9	79.7	78.8
9	104.7*	120.5	95.1	88.9	98.6*	87.1	113.1*	79.1	70.4	71.2	84.9	80.8
10	105.6*	115.5	90.9*	91.0	100.5	83.4	106.7*	77.0	70.7	72.3*	89.2	80.5
11	113.4	110.3*	87.0	92.9	94.0	78.3	96.8	74.9	71.2	71.9	91.0*	77.5
12	114.5	103.4*	86.8	93.6	85.4	76.3	89.5	72.0	70.7	72.5	94.6	76.5
13	118.9	99.4*	85.2	96.3	80.3	74.7	84.6	70.5	72.6	73.1	94.8*	77.3
14	114.0*	92.7*	89.3	97.7*	79.5	74.1	82.9	72.7	73.8	73.8	98.7	76.3
15	107.1*	89.5	90.1	98.2	78.7	72.6	82.6	75.7	75.0	76.6	91.8	83.7
16	106.9	85.0	89.5	95.2	79.5	74.1	83.9	75.6	75.6	79.7	90.8	84.7
17	101.5	82.1	91.4	89.8	78.1	75.0	81.8	79.5	75.3	82.1	89.2	85.9
18	94.9	80.9	95.4	91.4	83.6	75.3	84.6	78.3	75.5	84.9	87.1	87.5
19	96.7*	82.8	99.4	93.2	81.6	75.4	86.6	76.7	75.4	87.8	85.8	82.7
20	91.0	86.4	104.7*	105.4	79.5	76.8	92.0	73.4	76.8	89.9	84.4	82.2
21	87.4	95.2	102.2	108.8	79.4	80.4*	94.9	80.0	80.7	97.6	79.7	82.2
22	90.3	105.0	103.1	109.4	77.6	80.4	99.5	85.0	84.7	96.7*	83.5*	82.2
23	87.1	109.2	99.6	108.8	78.6	81.3	103.9	89.9	86.5	96.0	81.0	84.2
24	89.4	109.0*	104.5	106.1	81.6	85.3	106.2	97.6*	87.0	98.1	77.8	80.9
25	90.0	109.2*	104.7	101.3	83.8	88.9	112.7	101.0	88.0*	97.6	74.1	75.6
26	88.6	110.1*	101.1	100.3	85.0	91.2	115.5	101.0	91.8*	92.9	71.5	76.2
27	92.0	111.6*	99.9	94.8	85.5	95.1	115.9	101.7*	88.8	88.6	70.7	76.4
28	94.2	112.6	94.1	95.2	84.2	97.5	118.1	100.7	90.7	81.7*	70.8	75.8
29	99.0	109.5*	93.3	95.1	89.5*	100.8	116.5	99.1	94.9	76.4	70.7	
30	102.8	106.2*	90.8	94.1*	86.1	101.3	116.5*	97.4*	95.7*	74.1	70.8	
31	110.3		87.2		86.6	109.6		90.5		72.0	71.3	
MEAN	99.4	105.8	99.1	94.2	87.2	84.9	106.8	87.1	79.7	81.5	80.4	78.9

* adjusted for burst

Errata: The solar flux value for April 12, 1973 has heretofore been reported incorrectly as 130.4.

DAILY SOLAR

FEBRUARY

FEB 1974	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX			
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCRL 8800	AF 4
1	32	19	13	3	73.9	515	269	1
2	33	20	12	7	75.3	518	277	1
3	34	21	8	8	75.3	518	272	1
4	35	22	7	1	75.0	510	272	1
5	36	23	0	0	76.1	513	270	1
6	37	24	0	0	77.6	517	271	1
7	38	25	8	8	79.5	514	272	1
8	39	26	16	17	81.0	516	278	1
9	40	27	22	22	83.0	515	277	1
10	41	1	21	23	82.7	512	278	1
11	42	2	21	18	79.6	508	273	1
12	43	3	36	22	78.5	508	268	1
13	44	4	50	41	79.3	508	268	1
14	45	5	26	27	78.3	508	271	1
15	46	6	46	44	85.8	520	281	1
16	47	7	48	41	86.8	516	277	1
17	48	8	47	57	88.0	513	275	1
18	49	9	46	53	89.6	515	277	1
19	50	10	45	47	84.6	511	275	1
20	51	11	43	40	84.0	513	266	1
21	52	12	37	37	84.1	520	274	1
22	53	13	45	34	84.1	524	270	1
23	54	14	35	32	86.0	518		1
24	55	15	29	34	82.6	515	270	1
25	56	16	17	12	80.2	514	272	1
26	57	17	20	15	77.8	513	270	1
27	58	18	42	36	77.9	511	266	1
28	59	19	35	28	77.3	502	268	1
MEAN			27.7	25.2	80.9	514	272	1

* Corrected for burst.

R INDICES

Y 1974

SOLAR FLUX ADJUSTED TO 1 A.U.						
AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
118	71.8	70.2	50.2	36.7	22.1	8.7
119	73.1	74.8	52.9	38.0	24.1	9.5
116	73.1	73.7	52.6	37.9	24.5	9.4
117	72.9	71.6	52.0	38.6	23.0	9.1
119	74.0	75.7	52.6	40.5	23.8	9.4
120	75.4	76.4	54.5	38.5	22.6	8.5
120	77.4	77.7	55.3	38.9	24.8	11.0
125	78.8	79.7	58.0	40.2	24.0	9.0
124	80.8	80.8	55.3	40.9	24.4	9.1
124	80.5	80.9	57.1	41.2	24.5	9.3
123	77.5	78.7	56.1	38.9	24.8	9.2
121	76.5	76.1	54.9	40.2	23.3	8.6
123	77.3	75.7	55.2	40.9	19.1	8.5
120	76.3	76.0	54.3	40.9	19.5	8.9
128	83.7	81.9	55.6	42.5	26.1	19.6
127	84.7	83.5	57.6	41.9	26.4	11.4
128	85.9	83.8	57.1	40.9	25.5	16.4
128	87.5	84.5	58.0	41.0	28.6	15.8
127	82.7	80.3	55.5	38.6	19.4	10.3
125	82.2	79.6	55.7	38.3	17.8	9.0
126	82.2	82.3	54.9	38.3	18.0	8.7
127	82.2 84.2	81.9	57.7	37.6	18.9	8.7
125	80.9	79.7	52.0	37.2	21.9	8.8
124	78.6	79.3	52.7	37.3	18.2	8.2
120	76.2	74.1	51.4	37.2	18.4	8.6
121	76.4	76.7	52.2	37.0	18.4	7.6
121	75.8	76.5	50.4	37.3	17.6	8.0
123	78.9	78.2	54.5	39.2	22.2	10.0

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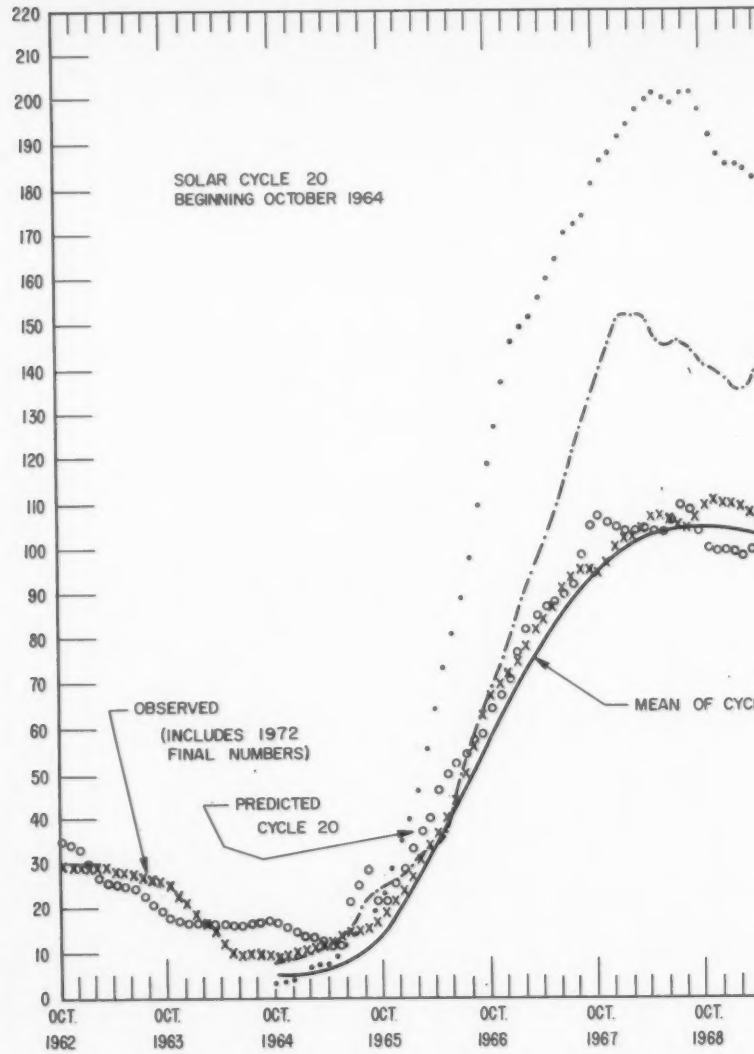
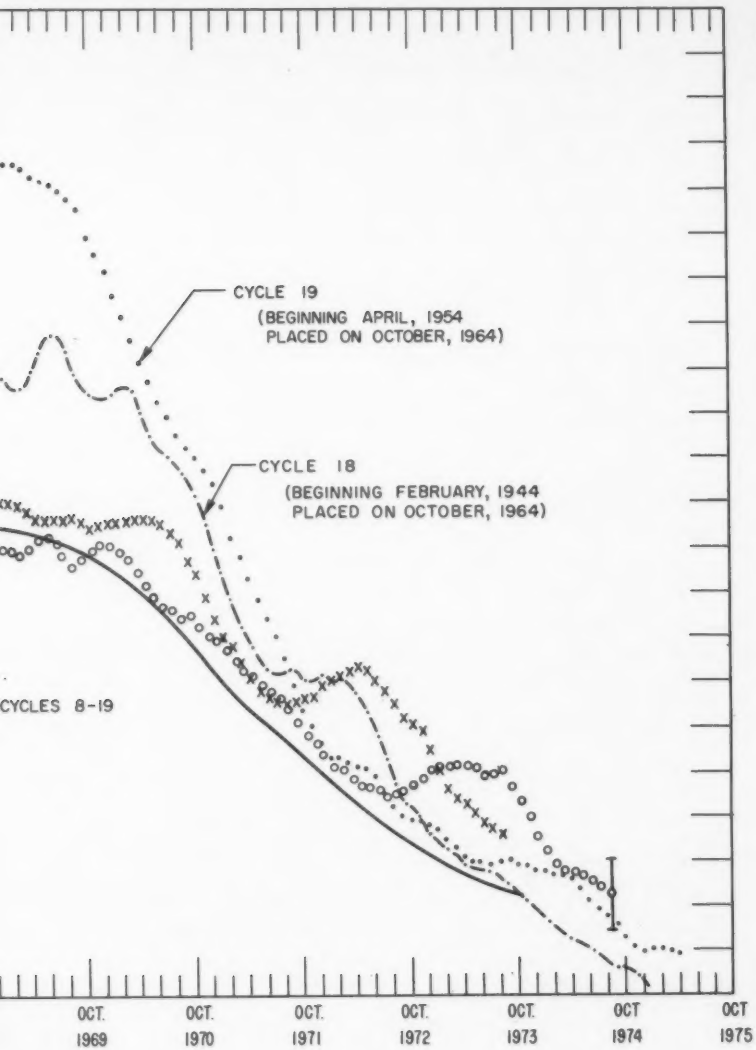
Feb 74



PREDICTED AND OBSER



ERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.0
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.3	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.4
1972	72.8	71.2	72.4	73.4	72.9	70.5	68.1	65.4	62.0	60.3	58.5	54.8
1973	50.3	45.8	43.6	42.3	40.3	38.6	37.2	36.0	35.2 (2)	33.8 (3)	32.2 (4)	30.6 (4)
1974	29.3 (5)	28.1 (6)	27.1 (7)	26.4 (7)	26.0 (7)	25.2 (8)	23.9 (8)	22.5 (8)	20.9 (8)	19.5 (9)	18.2 (9)	17.2 (10)
1975	16.4 (9)	15.5 (9)	14.9 (9)	14.4 (9)	13.8 (9)	13.4 (9)	13.3 (11)					

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1972.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

FEBRUARY 1974

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE FEB	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER DIST	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
PALE	11	2010E	2041	2015U	S12	E27	.457		13.9	31D	SF	3	V		1.55				F
BOUL	11	2010	2122	2015	S07	E28	.466	12742	13.9	72	1F		V	2030	2.40	2.70			
CATA	13	1845E	1050D	1850	S20	E20	.399		14.9	5D	SN	1		1050	.29	.31		(151)	
ATHN	13	1853E	1102D	1853U	S21	E18	.383	12742	14.8	9D	1N	1	C		2.48				U F
BOUL	13	2015	2035D	2020	S17	E71	.939	12747	19.2	20D	1N		C	2020	.86	2.36			
PALE	16	2153	2207D	2159	S13	W68	.921		11.8	14D	SF	3	C		.27				F
BOUL	16	2155	2215	2203	S13	W68	.921	12749	11.8	20	1F		C	2203	.86	2.17			
UPIC	17	1152E	1345U		S17	E07	.211	12752	18.0	113U	1F		P	1159	2.10				
RAMY	18	1820	1832	1821	S18	W63	.885		14.0	12	SN	4	C		.74				DE
PALE	18	1821E	1833	1822	S18	W62	.877	12749	14.1	12D	1B	3	C		1.44				F H
BOUL	18	1825E	1835	1825E	S17	W62	.877		14.1	10D	1N		C	1825	1.29	2.78			
RAMY	20	1513	1531	1516	S17	W30	.514	12752	18.4	18	1B	3	V		2.06				DE
MCMA	20	1514	1535	1516	S18	W31	.532	12752	18.3	21	SB		C	1516	1.29	1.50			EH
PALE	20	2322E	2335D	2322U	S17	W38	.621		18.1	13D	SN	3	C		1.27				DE
MANI	20	2340E	2343D	2340U	S18	W37	.611	12752	18.2	3D	1N	2		2340	2.06	2.62			F
BOUL	24	1356	1414	1409	S14	W71	.939	12752	19.3	18	1N		C	1409	1.29	3.54			
RAMY	24	1359	1413	1407	S16	W67	.913		19.6	14	SN	3	C		.46				DE
RAMY	24	1407E	1413	1410U	S17	W66	.906		19.6	6D	SN	4	V		.37				DE
BOUL	25	1817	1843	1827	S17	W90	.999		19.0	26	1N		C	1827	.64	2.66			
PALE	25	1821	1836	1826	S16	W90	.999		19.0	15	SN	3	C		.36				
MCMA	25	1824	1837	1829	S16	W89	.999	12747	19.1	13	SF		C	1829					D
BOUL	25	1845	2012	1925	S17	W90	.999		19.0	87	1N		C	1925	.75	3.11			
MCMA	25	1847	1904	1850	S16	W89	.999	12747	19.1	17	SN		C	1850					D
PALE	25	1852E	1953	1912U	S16	W90	.999		19.0	61D	SN	3	C						
BOUL	25	2016	2126	2058	S17	W90	.999	12747	19.1	70	1N		C	2058	.64	2.66			

Note: Catania and Capri-S express Maximum Intensities in percent of the local undisturbed chromosphere instead of percent of the local continuum. Parentheses are used to indicate this difference.

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked assymetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in preceding table.

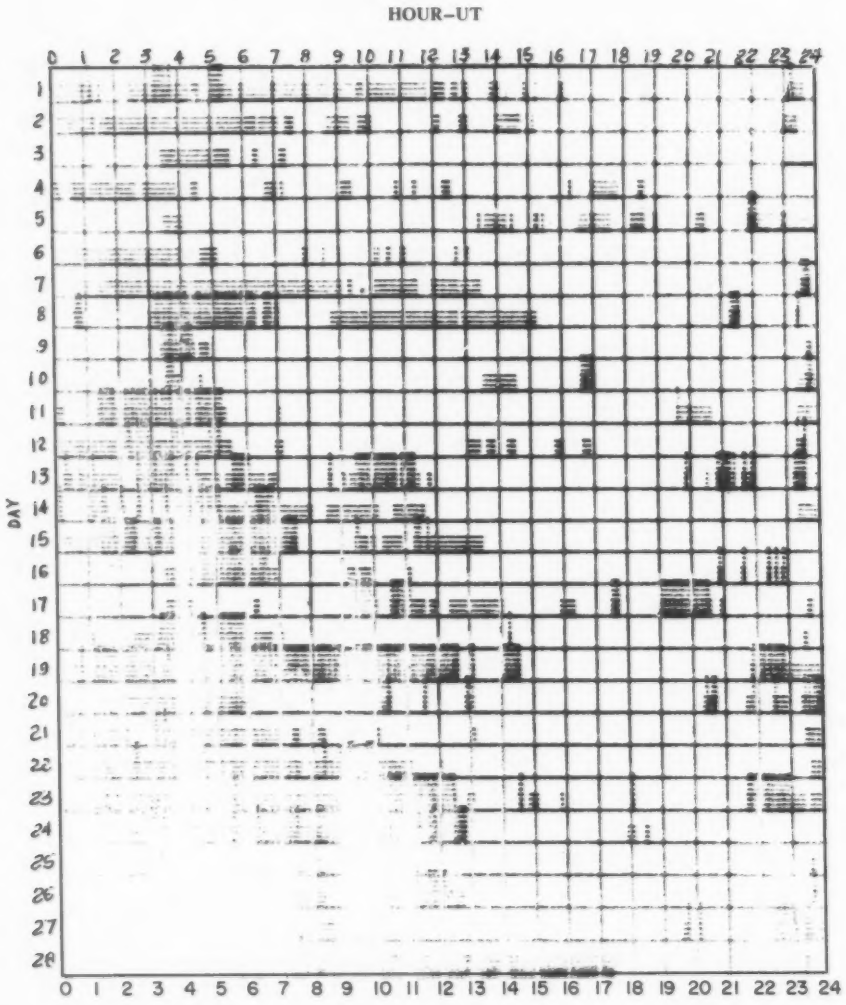
FEBRUARY 1974

01	1624	S01 W46	01	1625	S03 W47	03	1800	N08 W33	06	2058	S18 E18	07	0218E	N09 E86	08	0249E	S15 E84
08	0624E	S15 E82	08	1245E	S16 E75	08	1840	S17 E74	08	2017E	S17 E72	09	0251	S20 E69	09	0538	S16 E66
09	0711	S19 E69	09	0713	S16 E66	09	1030	S16 E66	10	0945	S25 E46	10	0946	N07 E36	10	0946	N09 E35
10	0950	S18 E51	10	1648	S15 E53	10	2327E	S17 E45	11	0035	S18 E47	11	2231E	S22 E38	12	1329	S10 E20
12	1340E	S09 E20	12	1824	S19 E24	12	1835	S17 E22	13	0201	N08 W60	13	1053E	S18 E74	13	1053E	S10 W01
14	2026	S13 W35	14	2027	S12 W36	14	2051	S16 W39	14	2141	S12 W40	14	2251	S12 W39	14	2302	S13 W43
15	0111E	S19 E42	15	0955	S13 W51	15	1505E	S11 W51	15	1511	S12 W51	15	1638	S19 E33	15	1756	S11 W51
15	1803E	S12 W50	15	1803E	S12 W50	15	1814	S12 W53	15	1834	S19 E32	15	1908	S19 E30	15	1959	S12 W54
15	2005E	S12 W55	16	0259	S15 W57	16	0310E	S12 W60	16	0320E	S13 W58	16	0609E	S12 W60	16	0813E	S12 W61
16	1646	S14 W66	16	1930E	S13 W66	16	1947	S19 E16	16	2108	S13 W68	16	2232E	S13 W74	17	0524	S17 E11
17	0755	S18 E10	17	0759	S17 E09	17	1325E	S19 E21	17	2243	S18 W51	18	0404E	S18 W54	18	1224	S17 W08
18	1226E	S18 W08	18	1509	S18 W13	18	1527	S17 W60	18	1558	S15 W11	18	1620	S15 W11	18	1622E	S17 W60
18	1847	S13 W64	18	2343E	S18 W12	19	0302	S18 W65	19	1548	S17 W17	19	1802	S20 W20	19	1805E	S20 W20
19	1818	S21 W20	19	2139E	S20 W22	19	2304E	S19 W22	20	0359	S17 W32	20	0609	S19 W32	20	0657	S17 W28
20	0900	S17 W27	20	1045	S17 W28	20	1308E	S18 W30	20	1330	S16 W30	20	1658	S18 W32	21	0043	S18 W37
21	0049E	S17 W36	21	0332E	S18 W42	21	0758E	S18 W45	21	0810	S18 W48	21	0822	S18 W42	21	1306	S18 W42
21	1311E	S18 W46	21	1312E	S17 W45	21	1312E	S17 W45	21	1316	S18 W51	21	1320E	S18 W45	21	1325	S18 W52
21	1636	S17 W46	21	1751	S17 W43	21	1812	S17 W42	21	1820	S17 W44	21	1902	S17 W44	21	2038	S18 W51
21	2124	S17 W49	21	2125	S17 W51	21	2126E	S18 W50	22	0047	S17 W46	23	0141	N10 E68	23	0158	N12 E65
23	0628	S17 W54	23	0818	S16 W56	23	1943	N15 E59	23	2133	S16 W60	23	2257E	S16 W60	23	2330	S15 W60
23	2332E	S16 W61	24	0223E	S16 W62	24	0554E	S18 W80	24	0605E	S17 W66	24	0625E	S18 W80	24	0732E	S16 W71
24	1835E	S17 W71	24	2005	S14 W72	24	2315E	S17 W90	25	0014E	S19 W80	25	0027E	S16 W79	25	0027E	S16 W79
25	0050	N15 E43	25	0357E	S16 W80	25	0744E	S18 W84	25	0909E	S17 W81	25	1348	S21 W90	25	1817	S17 W88
25	1908	S16 W89	25	1912E	S15 W90	25	2250	S17 W90	26	2039	N07 E66	27	1500	N08 E53	27	1500	N06 E52
27	1749E	N07 E55															

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

FEBRUARY 1974



Observatories included in total patrol:

Athenes	Carnarvon	Herstmonceux	Mitaka	Teheran
Boulder	Catania	Manila	Palehua	Upice
Bucharest	Gran Canaria	McMath-Hulbert	Ramey	Wendelstein

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

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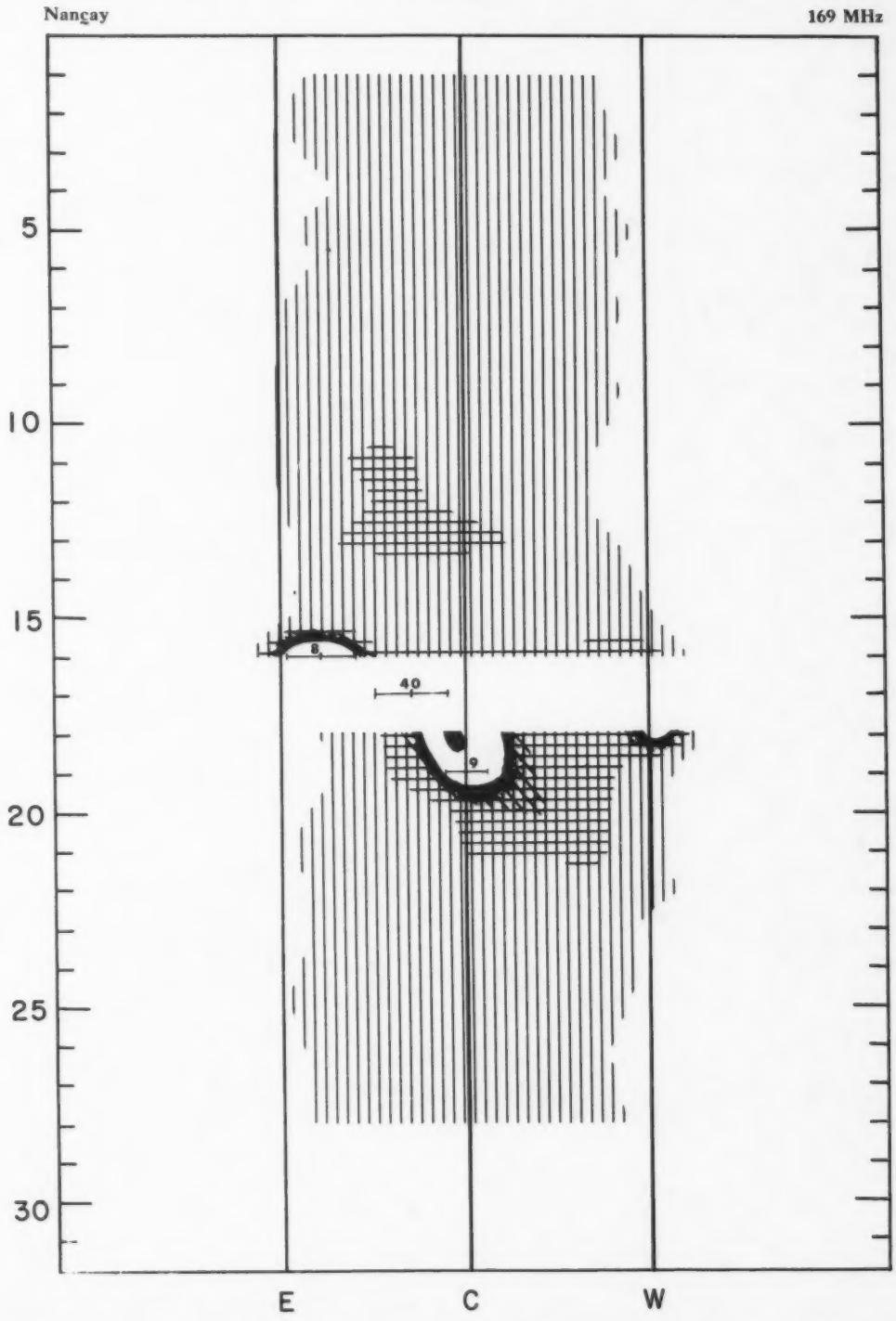
Feb 74

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

FEBRUARY 1974



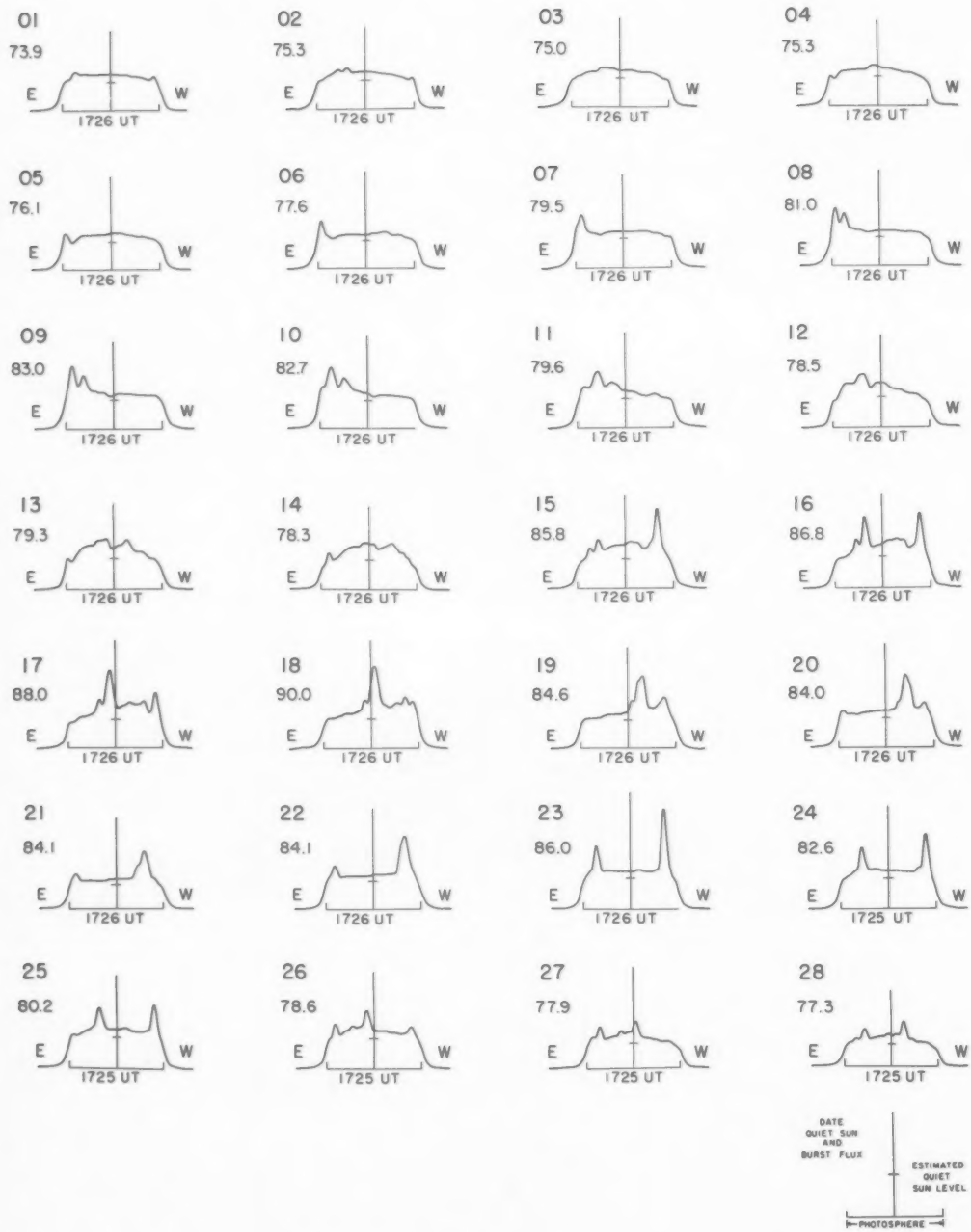
14
Feb 74

EAST-WEST SOLAR SCANS

February 1974

10.7 cm
Fan-Beam with 1.5 minutes of arc
E-W Resolution

ALGONQUIN RADIO OBSERVATORY
CANADA



EAST-WEST SOLAR SCANS

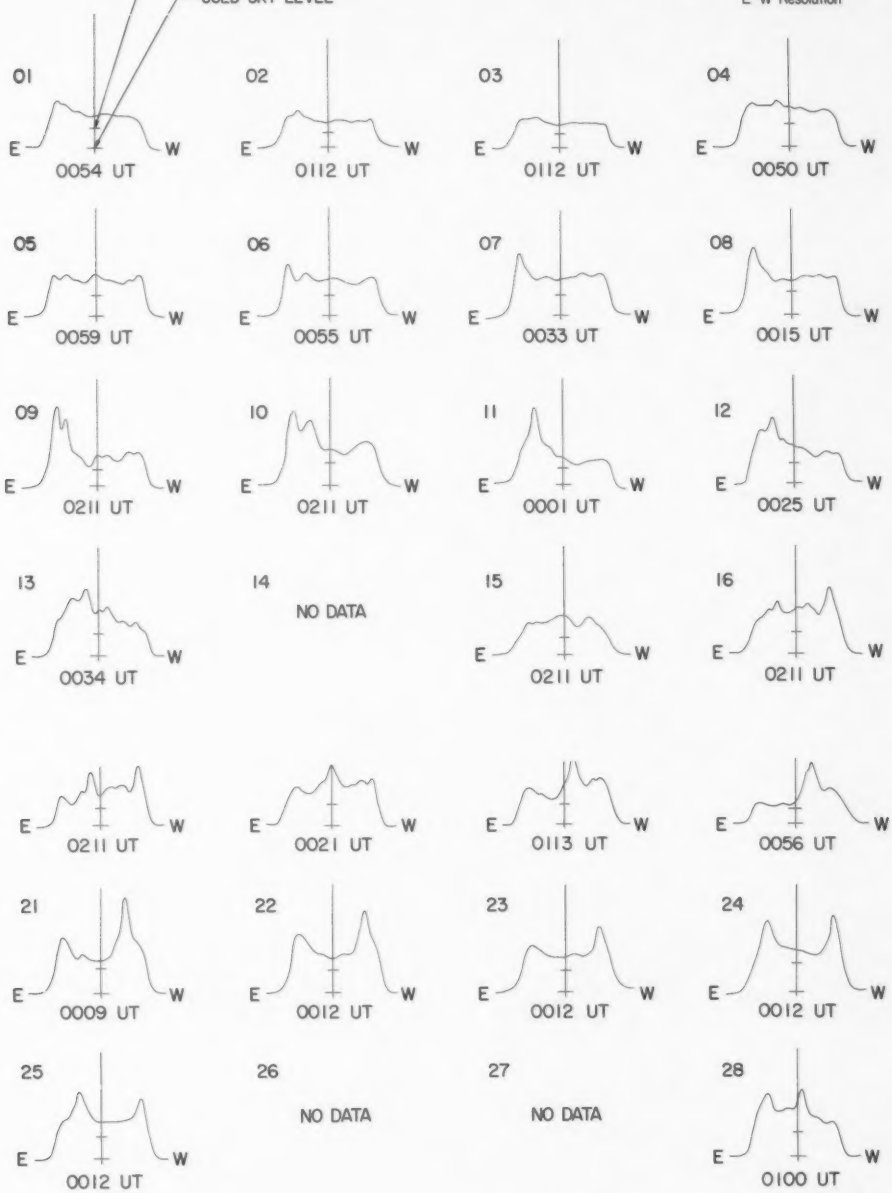
FEBRUARY 1974

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

21 cm
Fan-Beam with 2 minutes of arc
E-W Resolution



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Feb 74

EAST-WEST SOLAR SCANS

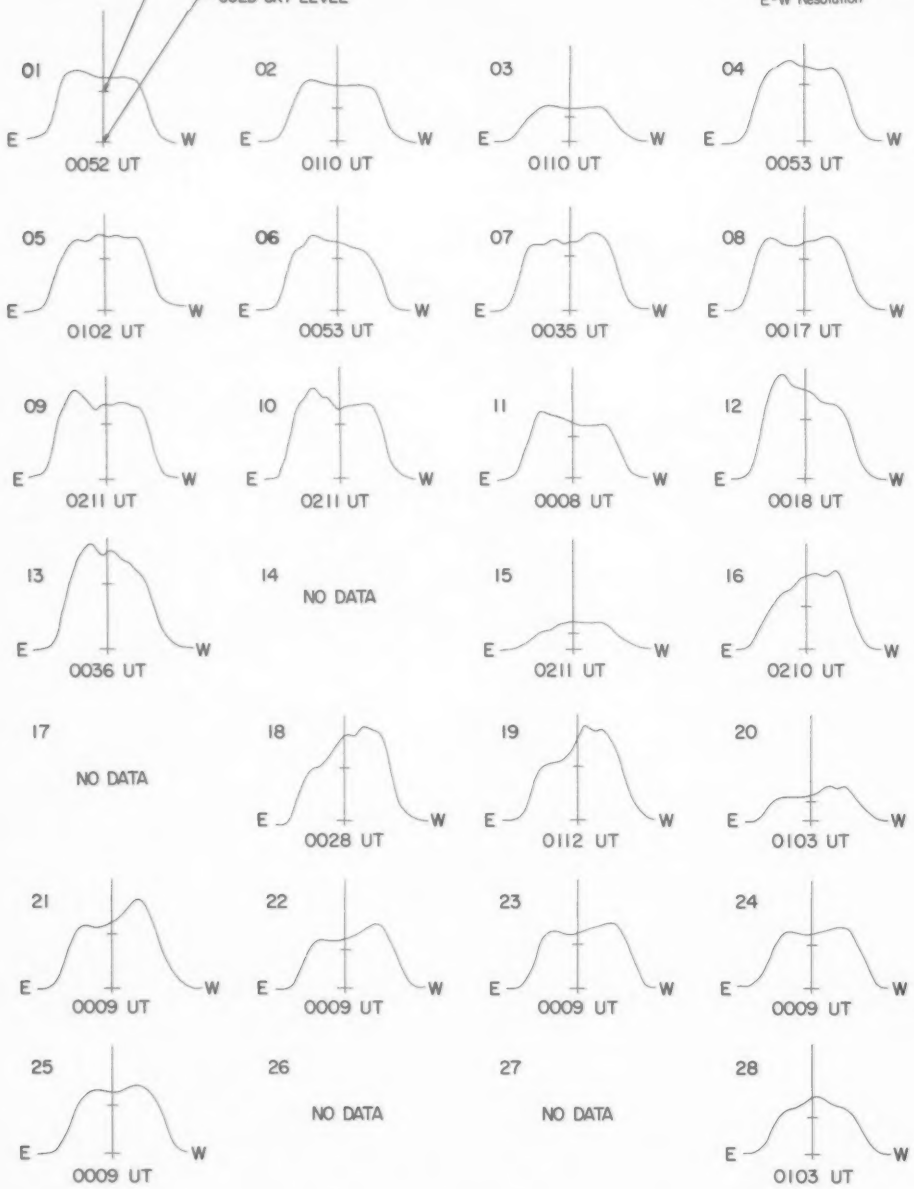
FEBRUARY 1974

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1974

FEB 1974	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
8	2695 CANR	3	0820	0822	3.5	4.0	1.0		
9	8800 MANI	4	0250.7	0251.7	2.3	41.2	9.9		
	2695 MANI	4	0250.7	0251.7	2.8	23.7	7.1		
	8800 MANI	1	0713.1	0713.3	2.2	6.6	3.3		
	2695 MANI	3	0713.1	0713.3	2.2	11.1	4.0		
15	2800 OTTA	24	1420	1505	45	2.4	1.2		
	2800 OTTA	24	1505		540 D	2.4			
	2800 OTTA	4	1505	1513	14	130.0	35.0		
	2695 BOUL	3	1509.5	1514	7.5	61.0	25.0		
	8800 SGMR	1	U	1518 U	9.6D	15.1	6.0		
	2695 SGMR	1	U	1517 U	6.4D	3.6	1.3		
	2800 OTTA	1	1518	1518.7	1	2.2			
	2800 OTTA	29	1519	1519	50	3.0	1.5		
	2800 OTTA	27	1755		100	1.2	1.0		
	2800 OTTA	24	1755	1805	10	1.2	0.6		
	2800 OTTA	24	1805		75	1.2			
	8800 SGMR	20	1810.3	1821.9	54.3	13.2	7.9		
	2800 OTTA	46	1811	1821.7	22	17.4	4.6		
	2695 SGMR	20	1811.8	1822	15.7	16.4	9.8		
	2800 OTTA		1813	1813.8	9	9.2			
	2800 OTTA		1820	1821.7	13	17.4			
	2695 BOUL	45	1812.5	1822.5	23.5	20.0	7.0		
	2800 OTTA	26	1920	1935	15	-1.2	-0.6		
	2800 OTTA	32	2025	2105	140	-1.4	-0.7		
16	8800 MANI	3	0301	0307.7	12.7	14.0	7.0		
	2695 MANI	1	0302.7	0305.8	9.1	7.4	2.5		
	2800 OTTA	21	1645	1655	40	1.2	0.6		
	2800 OTTA	1	1647	1649.2	4	1.0	0.5		
	2800 OTTA	27	1735		210	1.6			
	2800 OTTA	24	1735	1747	12	1.6			
	2695 PENT	20	1740	1747	35	1.3	0.7		
	2800 OTTA	24	1747		183	1.6			
	2800 OTTA	20	1940	1950	55	1.2	0.7		
	2800 OTTA	26	2050	2105	15	-1.6	-1.0		
17	2800 OTTA	26	1355	1555	120	-1.9	-1.0		
	2695 PENT	1	2248	2250	6	1.3	1.0		
18	2800 OTTA	27	1418 E		72 D	1.6			
	2800 OTTA	24	1403						
	2800 OTTA	24	1418 E		32 D	1.6			
	2800 OTTA	26	1450	1530	40	-1.6	-0.8		
	2800 OTTA	27	1747.5		34.5	.6			
	8800 SGMR	4	1819.7	1820.4	2.4	36.8	11.0		
	2800 OTTA	2	1819.5	1820.8	2.5	9.4	4.7		
	2695 BOUL	3	1819.5	1820.5	5	13.0	4.0		
	2695 SGMR	4	1819.7	1820.8	3.1	10.1	2.0		
19	2800 OTTA	3	1819.1	1819.5	3	24.6	6.2		
	8800 SGMR	4	1819.2	1819.5	3.9	22.5	6.7		
	2695 SGMR	3	1819.3	1819.6	3.9	24.1	7.2		
	2695 BOUL	8	1820	1820.5	4.5	27.0	11.0		
	2800 OTTA	29	1822.1		21	2.2	0.8		
	2800 OTTA	8	2137.1	2137.3	.5	.8	0.4		
20	8800 SGMR	4	1330	1331.2	10.5	26.7	8.0		
	2695 SGMR	4	1329.7	1331	13.9	20.4	6.2		
	2800 OTTA	51	1333 E	1334	6 D	6.6			
	8800 SGMR	4	1513.7	1514.9	13.9	54.7	16.4		
	2695 SGMR	4	1513.9	1515.9	10.8	29.2	8.8		
	2800 OTTA	46	1513.7	1515.5	9.3	30.0	13.0		
	2800 OTTA		1513.7	1515.5	3.9	30.0			
	2695 BOUL	45	1514	1516	9	33.0	11.0		
	2800 OTTA		1517.6	1519	5.4	15.0			
	2800 OTTA	29	1523		8	1.6	0.8		
	2695 SGMR	3	1614.9	1615.1	.6	17.3	5.2		
	2800 OTTA	21	1657	1702	15	1.6	0.8		
	2800 OTTA	1	1700	1700.5	1.5	5.0	2.5		
	2695 BOUL	3	1700	1701	1.5	10.0	4.0		
	2695 PENT	24	2319	2323	4	3.2	1.8		
	2695 BOUL	45	2320	2323.5	4	3.0	1.0		
	2695 PENT	24	2323		55 D	3.2			
	8800 MANI	2	2358.3	0001	4.8	7.9	3.1		
	2695 MANI	4	2358.7	0001.2	5.6	18.5	7.7		
	2695 PENT	4	2359	2401.1	7	19.4	6.5		
21	8800 SGMR	1	1310.6	1315.3	6.7	5.5	2.8		
	2800 OTTA	27	1310		120	5.9	3.7		
	2800 OTTA	25	1310	1317	7	5.9	3.0		
	2695 SGMR	1	1310.7	1315.4	7.7	4.9	2.5		
	2800 OTTA	1	1312.5	1313.5	1.5	2.0	1.0		
	2800 OTTA	1	1314.7	1315.1	2.5	3.5	1.8		
	2800 OTTA	24	1317		55	5.9			
	2800 OTTA	26	1412	1510	58	-5.9	-3.0		
22	2800 OTTA	22	1435	1438	21	2.2	1.1		
23	2800 OTTA	21	1343	1350	13	.8	0.4		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1974

FEB 1974	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
	2800 OTTA	1	1343.2	1344	1	.8	0.4		
	2800 OTTA	27	1445		200	1.6	1.2		
	2800 OTTA	24	1445	1545	60	1.6	0.8		
	2800 OTTA	24	1545		105	1.6			
	2800 OTTA	26	1730	1805	35	-1.6	-0.8		
	2695 PENT	2	2255.9	2257.1	2.5	5.0	1.2		
	2695 BOUL	8	2257	2258	1	7.0	3.0		
	2695 BOUL	3	2331	2332	1.5	5.0	2.0		
	2695 PENT	1	2331.2	2331.5	1.5	2.4	1.2		
	2695 MANI	1	2331.4	2331.5	.8	2.3	.8		
24	8800 SGMR	1	1407.7	1408.5	3.9	5.5	1.7		
	2695 SGMR	2	1407.8	1408.5	7.4	7.6	2.3		
	2800 OTTA	2	1407.8	1408.5	1.5	7.9	3.4		
	2800 OTTA	29	1409.3	1409.3	10	1.2	0.6		
	2800 OTTA	20	1430		90	1.6	1.0		
	2800 OTTA	8	1725	1725.5	.5	1.1	0.5		
25	8800 SGMR	1	1740.6	1740.7	.2	8.9	2.8		
	2695 SGMR	8	1740.7	1740.7	.4	33.5	10.1		
	2800 OTTA	1	1809.2	1811.5	4	.6	0.3		
	2800 OTTA	8	1811	1811		.8			
27	2800 OTTA	20	1345	1427	135	1.4	0.7		
	2800 OTTA	20	1745	1800	65	1.4	0.7		
28	2800 OTTA	20	2018	2030	52	1.4	0.7		

Observatories:

BOUL = Boulder CRON = Carnarvon OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill
CANR = Canary Islands MANI = Manila

Explanation of Type Code:

1 Simple 1 6 Minor 22 Simple 3F 27 Rise and Fall 32 Absorption 44 Noise storm in Progress
2 Simple 1F 7 Minor + 23 Simple 3AF 28 Precursor 40 Fluctuation 45 Complex
3 Simple 2 8 Spike 24 Rise 29 Post Burst Increase 41 Group of Bursts 46 Complex F
4 Simple 2F 10 Simple 3 25 Rise A 30 Post Burst Increase A 42 Series of Bursts 47 Great Burst
5 Simple 21 Simple 3A 26 Fall 31 Post Burst Decrease 43 Onset of Noise Storm 48 Major
49 Major +

PIONEER IX

FEBRUARY 1974

Date Feb. 1974	DSN Coverage (UT)	Data Time (UT)	ESP (°)	SOLAR WIND[1] U_{H^+} (km/sec)	N_{H^+} (H^+/cc)	T_{H^+} (x10^6°K)	TAU (days)	IP E-FIELD[2] 400 Hz (mv)	IMF[3] |B| (γ)	IMF[3] φ (°)	COSMIC RAY PROTONS[4] (particles/sec) >13.9 Mev	COSMIC RAY PROTONS[4] (particles/sec) >40 Mev
3	1723-2227	1800	-056.9	655**	---	---	-3.71	---	7.4	270	---	*
		1900		655**	---	---			6.9	317	---	
		2000		655**	---	---		---	8.8	019	---	
		2100		585**	---	---		---	7.8	007	---	
		2200		630**	---	---		---	6.5	044	---	
6	0150-0303	0200	-058.0	517	---	---	-3.63	0.24	8.8	346	6.56	
		0300		514	---	---		.246	8.	351	6.56	
13	0222-0527	0300	-062.4	349	---	0.103	-3.55	.117	5.5	244	6.58	
		0400		335	---	.099		.155	5.3	310	6.66	
		0500		332	---	.076		.156	8.1	291	6.6	
16	0800-1140	0800	-064.1	702	---	---	-4.22	.182	7.4	090	6.25	
		0900		704	---	---		.19	9.6	085	6.29	
		1000		633	---	---		.175	8.1	067	6.31	
		1100		620	---	---		.183	9.2	127	6.46	
17	0456-0959	0500	-064.6	633	---	---	-4.22	.213	7.8	253	6.37	
		0600		641	---	.272		.242	5.6	161	6.41	
		0700		663	---	.253		.205	9.2	083	6.43	
		0800		630	---	.252		.247	7.9	162	6.36	
		0900		598	---	---		.19	6.4	149	6.42	
18	0501-0946	0500	-065.2	554	---	---	-4.15	.149	8.5	193	6.25	
		0600		543	---	---		.13	7.2	177	6.43	
		0700		534	---	.127		.15	7.7	166	6.29	
		0800		525	---	.085		.146	7.5	165	6.24	
		0900		523	---	---		.147	6.9	165	6.4	
	2212-0032	2200	-064.8	542**	---	---	-4.12	.199	8.8	041	5.78	
		2300		542**	---	---		.263	3.3	224	6.39	
		2400		542**	---	---		.213	7.3	033	6.	
27	0502-0645	0500	-070.6	350**	---	---	-4.13	.159	13.9	015	6.58	
		0600		363**	---	---		---	15.	001	---	

[1] Wolfe - NASA/ARC
[2] Scarf - TRW, Inc.
[3] Sonett and Colburn - NASA/ARC
[4] Webber - Univ. of N. H.

ESP = Earth-Sun Probe Angle.

* No data are reported for the higher energy level of Cosmic Ray Protons because they are still under evaluation by the principal investigators.

** Peak velocity-Wolfe's Least Squares analysis not done. Data excessively noisy since Pioneer 9 beyond range of 26 meter antenna net.

Note: Data sampled hourly unless otherwise noted.

INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1893	1971 DEC 20	T	A	A	A	A	A	A	A	T	T	T	T	–	T	T	T	T	T	T	T	T	T	T	–	T	T	T
1894	1972 JAN 16	T	A	A	A	A	T	T*	T	T	T	T	T	T	T	T	T	T	A	A	A	T	T	T	T	T	TA	A
1895	FEB 12	A	T	A	A	A	A	T	T	T	TA	A	–	A	T	T	T	T	TA	A	T	T	T	T	T	TA	A	A
1896	MAR 10	A	A	A	A	A	A	A	A	A	A	A	T	A	T	T	T	T	A	A	T	T	T	T	T	T	A	A
1897	APR 6	A	T	T	A	T	T	T	T	T	T	T	T	T	A	T	T	A	A	A	A	A	–	A	A	T	TA	A
1898	MAY 3	A	A	A	–	A	T	T	T	T	T	T	T	T	A	A	T	A	A	A	A	A	T	A	T	T	A	T
1899	MAY 30	A	A	*	A	A*	T	T	A	T	T	T	A	–	–	–	–	–	T	–	A	A	T	T	T	T	TA	A
1900	JUN 26	A	A	A	A	A	A	A	AT	T	T	T	TA	A	T	T	A	A	A*	A*	A	T*	T	T	T	T	T	TA
1901	JUL 23	A*	A*	A*	A	A	A	A	A*	T	T	A	A	A	–	A	T	T	T	T	T	A	T	T	T	T	A	–
1902	AUG 19	–	–	A	A	A	A	A	T	A	A	A	A	T	A	A	A	T	T	T	T	A	A	T	A	A	A	–
1903	SEP 15	A	T*	A	A	A	A	A	T	A	A	A	–	–	–	–	–	T	T	T	T	T	–	T	A	A	A	T
1904	OCT 12	T	–	–	A*	T	T	T	A	A	T	A	A	A	A	A	AT	T	AT	T*	T	–	A*	AT	T	T	*	A
1905	NOV 8	A	A	A	AT	AT	AT	T	T*	A	A	A*	AT	A	A	AT	T	T	TA	T	T	T	A	A	A	A	AT	T
1906	DEC 5	T	T	AT	–	–	T	T	AT	–	T	T	A	–	–	T	TA	A	T	T	T	A*	T	T	T	T	AT	T
1907	1973 JAN 1	T	T	T	T	T	T	T	–	AT	T	–	–	TA	A	A	A	A	A	T	–	–	T	–	T	–	T	T
1908	JAN 28	T	A	T	T	T	T	T	T	A	TA	A	A	AT	TA	AT	TA	AT	–	A	A	T	T	T	T	T	T	T
1909	FEB 24	T	T	TA	T	T	–	TA	A	A	T	A	A	A	AT	A	A	A	TA	A	A	TA	A	A	T	T	T	T
1910	MAR 23	T	T	T	A	T	T	T	TA	A	TA	A	A	–	A	A	TA	A	A	AT	T–	–	T	T	T	T	T*	T*
1911	APR 19	T	AT	T-	T	T	T	A	T	T	TA	A	A	A*	A	AT	TA	A*	T	A	TA	T*	AT	A	T	A	T	A*
1912	MAY 16	T	T	T	T	T	T	TA	T	A	AT	T	A	A	A	A	A	A*	A	A	A	A	T*	–A	A	–	T	T
1913	JUN 12	T*	T	–	T	T*	A	T	T*	T*	T	T	AT	A	A	T	–	T	A	A	A	A*	AT	–	T	A	A	T
1914	JUL 9	T	T	A	T	T	A	T*	T*	A	AT	–	A	T	TA	T	T	T	A	A*	A	A*	TA	A	TA	T*	T*	T
1915	AUG 5	T	A	A	AT	A	T	T*	T	*	AT	T	AT	T	A	TA	T	T	A	A	AT	A*	AT	A	A	TA	A*	A
1916	SEP 1	TA*	T	T	AT	A	TA*	A	*	T	T	T	A	A	A	T	T	T	A	T	A	A*	A	T*	A	A	A*	A
1917	SEP 28	A*	A	AT	T	T	A*	A	A	A	A	T*	A	AT	A*	AT	T*	AT	AT	T	T	T*	T	T	T*	T	T	T*

JANUARY 1974 DATA

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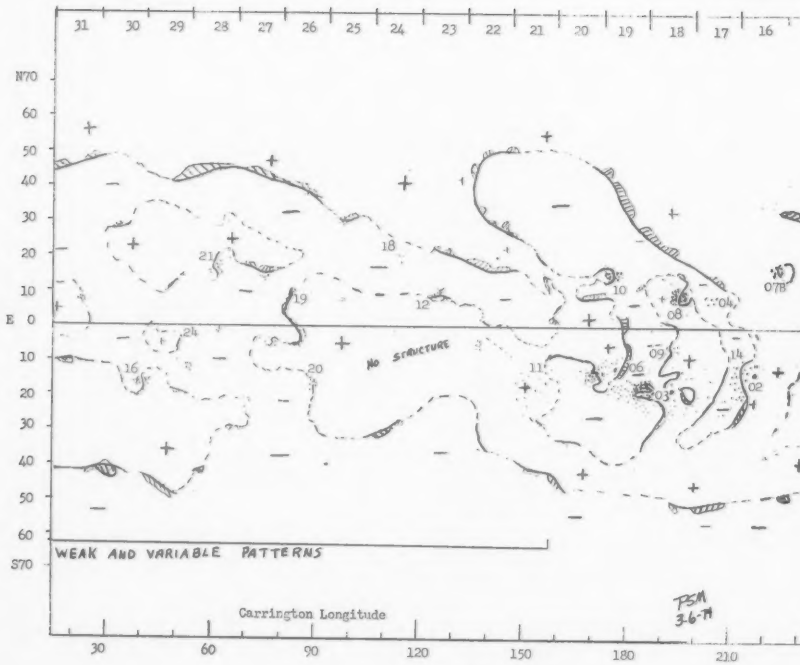
Errata: See page 92.

For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

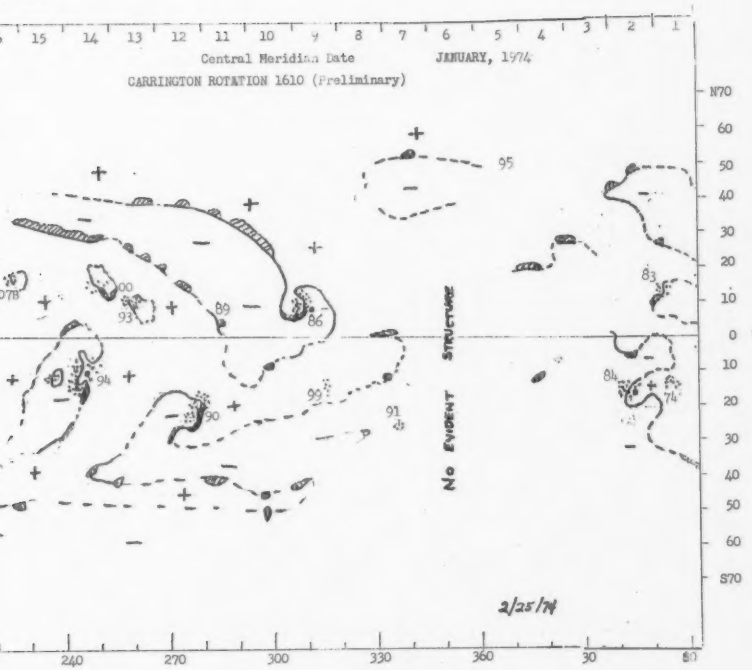
Hα SYNOPTIC

JANUARY 19



C CHART

Y 1974

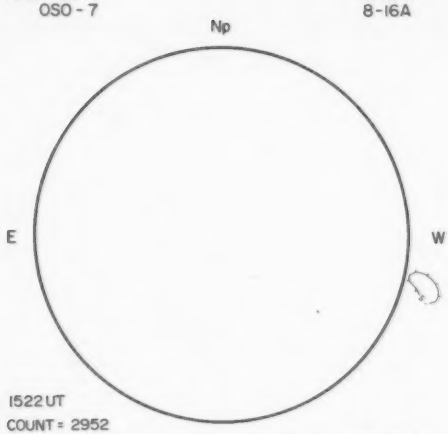


23 Jan 74

JANUARY 1, 1974 (P = 2.20, B_o = -3.03

NASA GSFC
OSO - 7

X-RAY
8-16A



1522 UT
COUNT = 2952
ROLL = 4.8°
P-TH = 6.55

Counts per 0.125 sec.

McMATH-HUL

1520 UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

8.6 cm maps from Prospect Hill not available at time of publication.

W

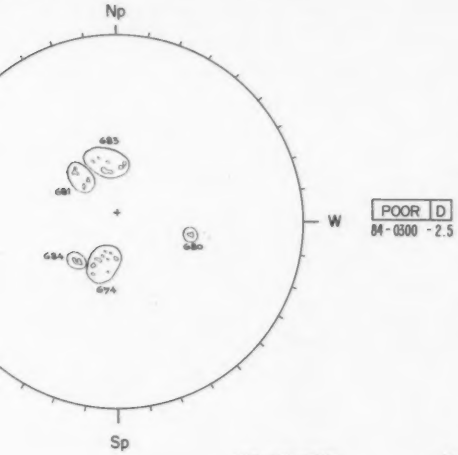
Sp

Contours in intervals
of 200° K

.03, L_o = 63.75)

24 Jan 74

HULBERT CALCIUM REPORT



POOR | D
84-0300 -2.5

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E

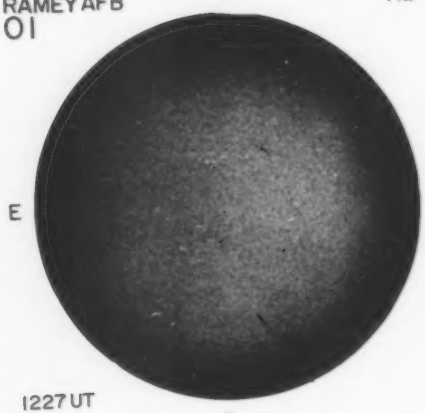
NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

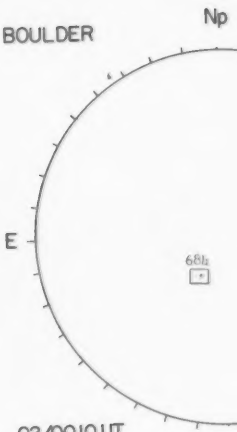
Sp

RAMEY AFB
01



1227 UT

BOULDER



02/0010 UT

NASA GSFC
OSO-7

1522 UT

Np

SUNSPOTS

W

Sp

CORONA
KISLOVODSK

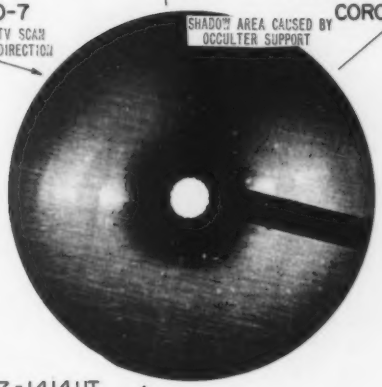
NRL
OSO-7

TV SCAN
DIRECTION

Np

WHITE - LIGHT
CORONA

SHADOW AREA CAUSED BY
OCCULTER SUPPORT



E

W

1107 - 1414 UT

STREAKS, ALWAYS AT 90°
TO SCAN DIRECTION

Sp

Np

FE XV
284A

W

Sp

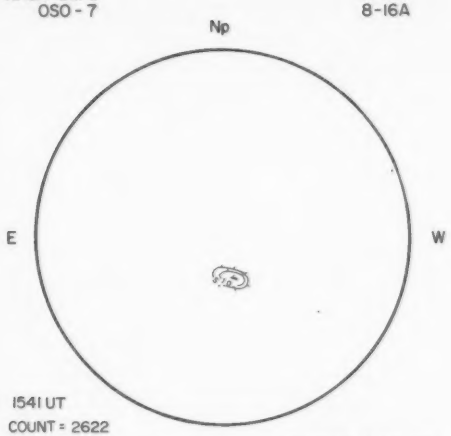
COUNT = 5305
ROLL = 4.8°
P-TH = 6.55

25
Jan 74

JANUARY 2, 1974 (P = 1.72, B_o = -

NASA GSFC
OSO - 7

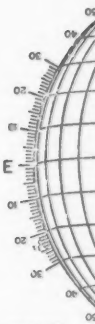
X-RAY
8-16A



1541 UT
COUNT = 2622
ROLL = 5.3°
P-TH = 6.50

Counts per 0.125 sec.

CATANIA



1045UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

Sp

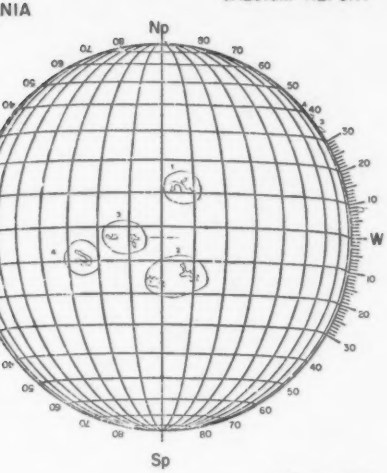
Contours in Interval
of 200° K

$_{o}$=-3.15, L_{o}=50.58)

26 Jan 74

CALCIUM REPORT

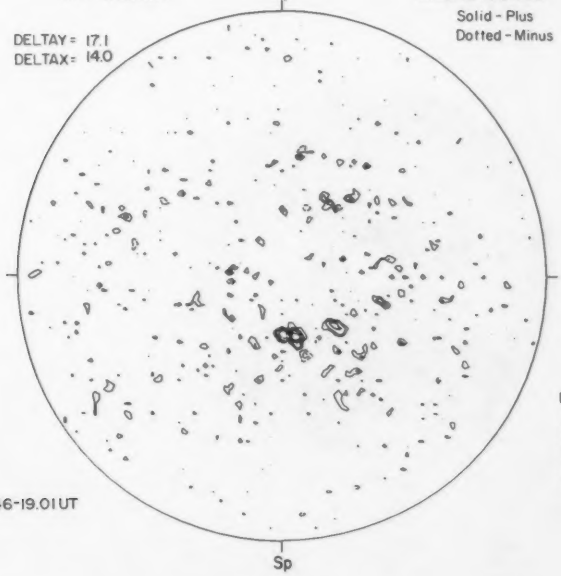
NIA



FAIR SS
02-0868 ---

nm

MT. WILSON



MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY= 17.1
DELTAX= 14.0

Levels
± 5
± 10
± 20
± 40
± 80

rvals

17.46-19.01 UT

BOULDER
02

Np

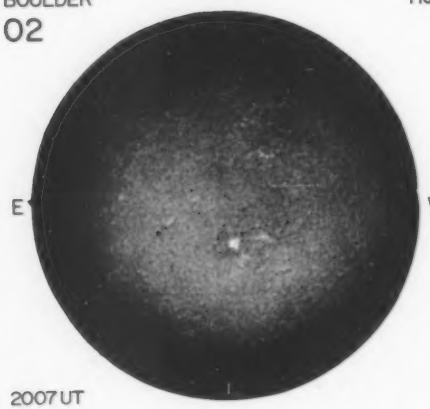
Hα

E

W

Sp

2007 UT



BOULDER

N

E

1640 UT

S

NASA GSFC
OSO-7

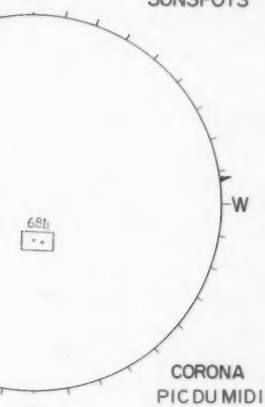
N

E

1541 UT

Np

SUNSPOTS



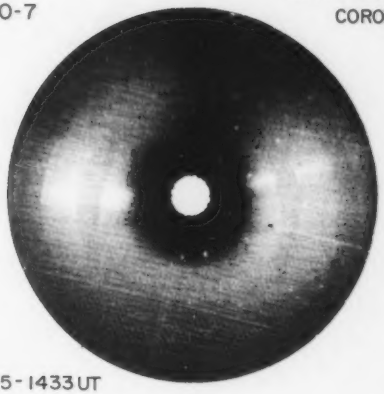
CORONA
PIC DU MIDI

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



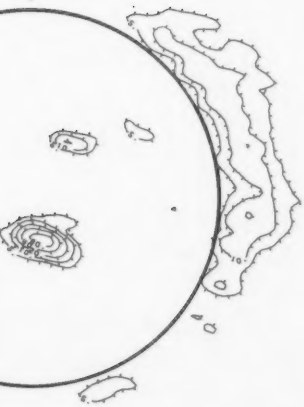
1125-1433 UT

Sp

Np

FE XV
284A

Np



W

Sp

COUNT = 4843
ROLL = 5.3°
P-TH = 6.50

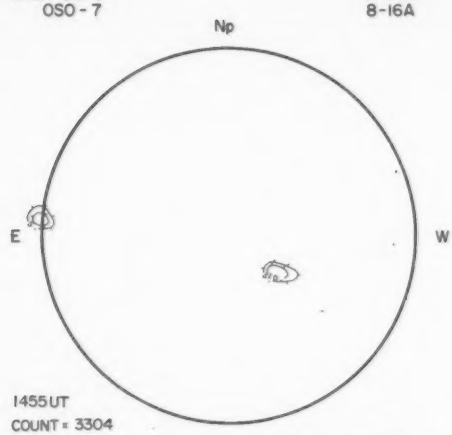
27
Jan 74

JANUARY 3, 1974 (P= 1.23, B_o=-3.

NASA GSFC
OSO-7

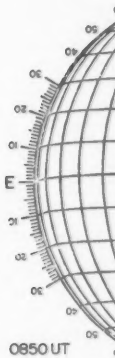
X-RAY
8-16A

CATANIA



1455 UT
COUNT = 3304
ROLL = 5.7°
P-TH = 6.44

Counts per 0.125 sec.



0850 UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

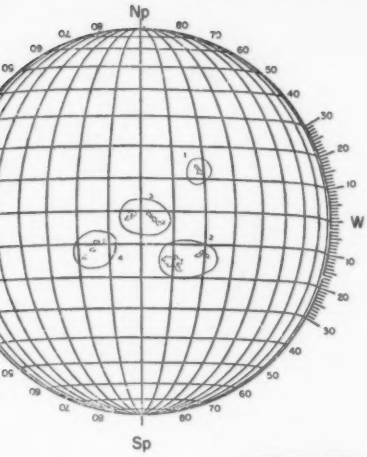
Sp

Contours in Intervals of 200° K

-3.26, $L_o = 37.41$)

28 Jan 74

CALCIUM REPORT



POOR EC
02-0742 ---

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E

NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
03

Np

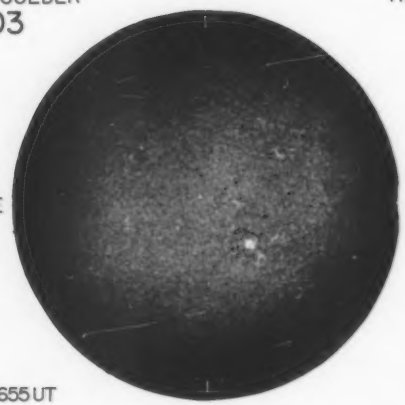
Hα

E

W

Sp

1655 UT



BOULDER

N

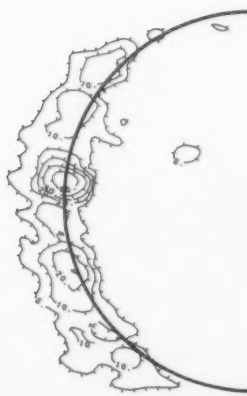
E

1800 UT

NASA GSFC
OSO - 7

N

E

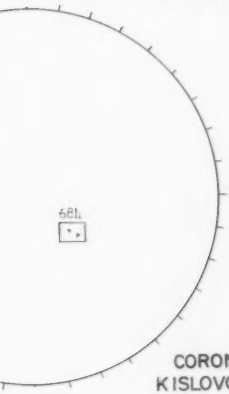


1455 UT

S

Np

SUNSPOTS



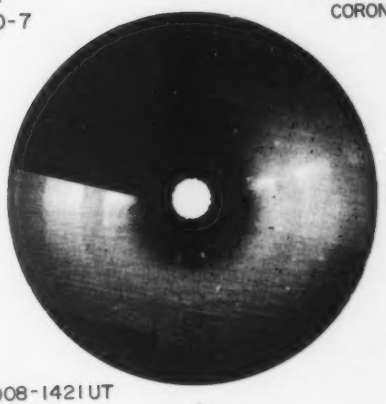
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE - LIGHT
CORONA



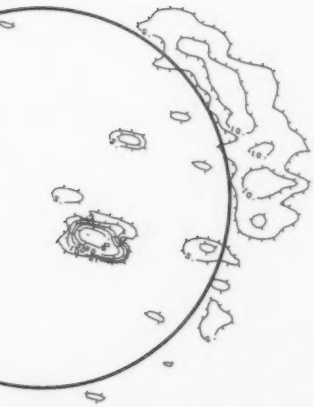
1008-1421 UT

Sp

Np

FE XV
284A

Np



W

Sp

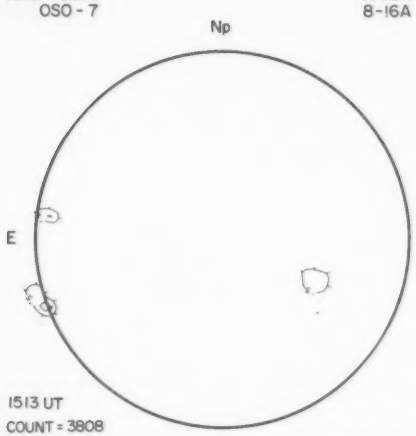
COUNT = 5769
ROLL = 5.7°
P-TH = 6.44

29
Jan 74

JANUARY 4, 1974 (P = 0.74, B_o = -3.38

NASA GSFC
OSO - 7

X-RAY
8-16A



1513 UT
COUNT = 3808
ROLL = 6.2°
P-TH = 6.38

Counts per 0.125 sec.

McMATH-HULBE

1515 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

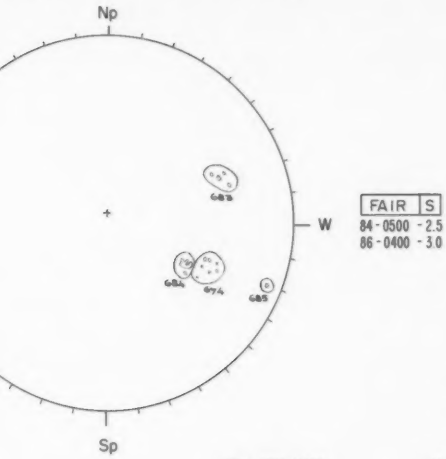
Sp

Contours in Intervals
of 200° K

38, $L_o = 24.24$)

30
Jan 74

ULBERT CALCIUM REPORT



MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

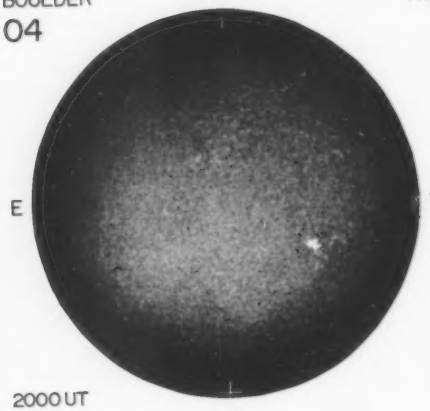
DELTAY =
DELTAX =

W E NO DATA W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
04



2000 UT

BOULDER

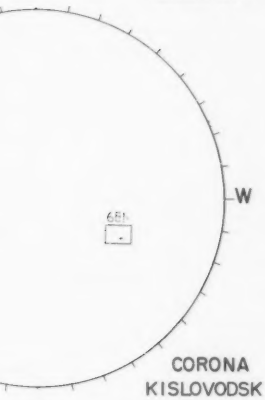
1800 UT

NASA GSFC
OSO-7

1513 UT

Np

SUNSPOTS



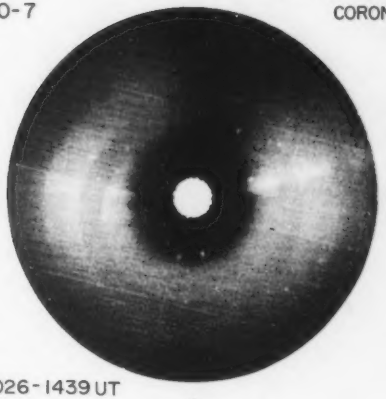
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



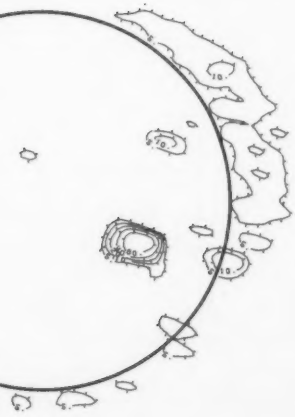
1026-1439 UT

Sp

Np

FE XV
284A

Np



Sp

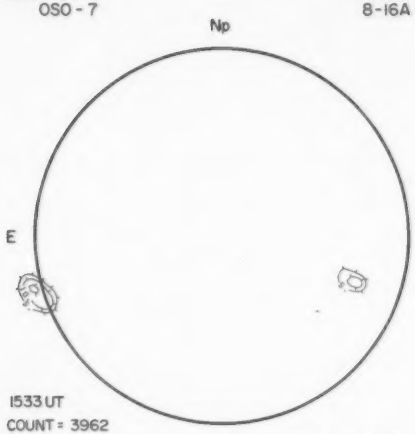
COUNT = 6504
ROLL = 6.2°
P-TH = 6.38

31
Jan 74

JANUARY 5, 1974 (P = 0.26, B_o = -3.4

NASA GSFC
OSO - 7

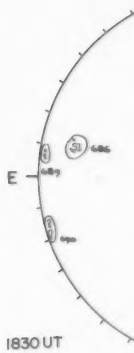
X-RAY
8-16A



1533 UT
COUNT = 3962
ROLL = 6.7°
P-TH = 6.32

Counts per 0.125 sec.

McMATH-HUL



1830 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

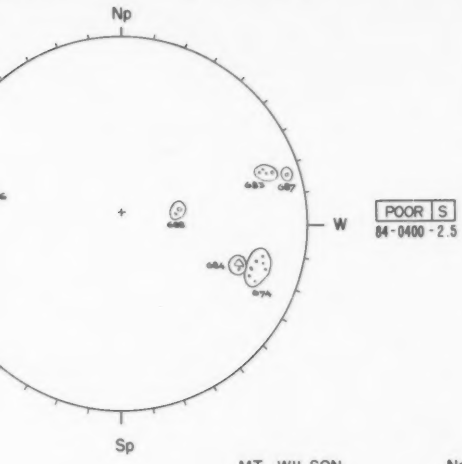
W

Sp

Contours in Intervals
of 200° K

3.49, L_o = 11.07)

HULBERT CALCIUM REPORT



POOR | S
84-0400-2.5

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E

NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

RAMEY AFB
05

Np

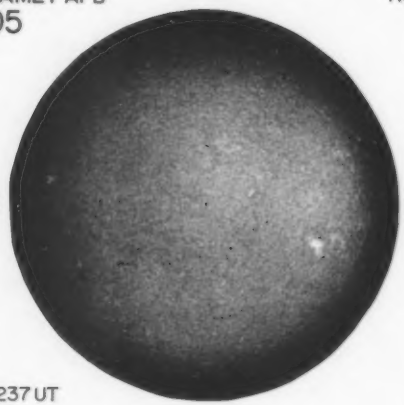
Hα

E

W

Sp

1237 UT



BOULDER

E

NO SPO

1630 UT

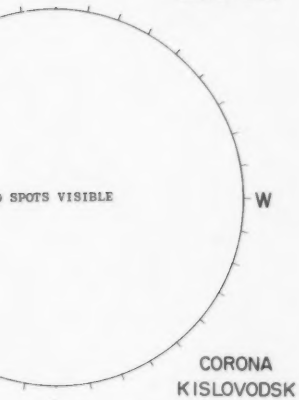
NASA GSFC
OSO-7

E

1533 UT

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

0927-1353 UT

Sp

Np

Np

FE XV
284A

W

Sp

COUNT = 6598
ROLL = 6.7°
P-TH = 6.32

33
Jan 74

JANUARY 6, 1974 (P=-0.23, B_o=-3.

NASA GSFC
OSO-7

X-RAY
8-16A

Np

E

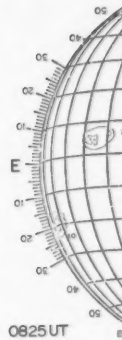
W

Sp

1551UT
COUNT = 4005
ROLL = 7.3°
P-TH = 6.25

Counts per 0.125 sec.

CATANIA



E

0825UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

Sp

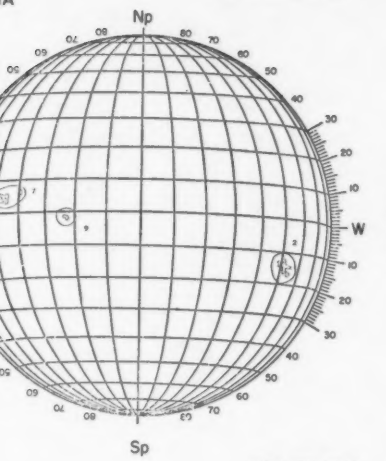
Contours in Intervals
of 200° K

-3.60, L_o = 357.90)

34
Jan 74

CALCIUM REPORT

IA



FAIR	SS
02 - 0636	---
07 - 0515	---
10 - 1705	---

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

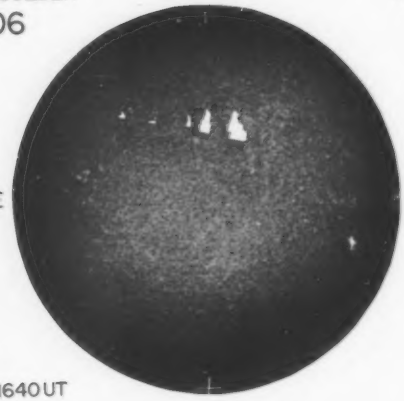
W E **NO DATA** W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

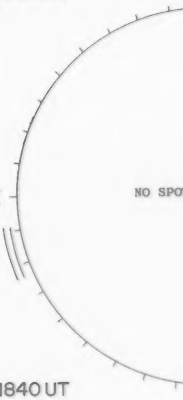
ls

BOULDER
06



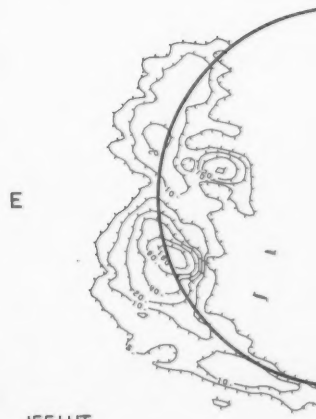
1640 UT

BOULDER



1840 UT

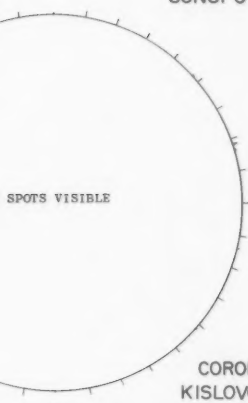
NASA GSFC
OSO-7



1551 UT

Np

SUNSPOTS



Sp

CORONA
KISLOVODSK

Intermittent data w. limb

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

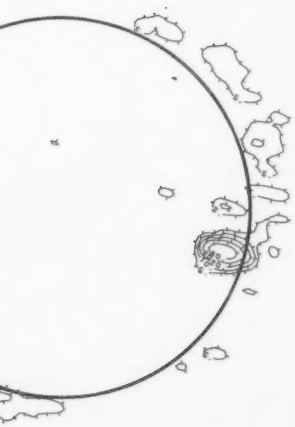
0927-1341 UT

Sp

Np

FE XV
284A

Np



W

Sp

COUNT = 7115
ROLL = 7.3°
P-TH = 6.25

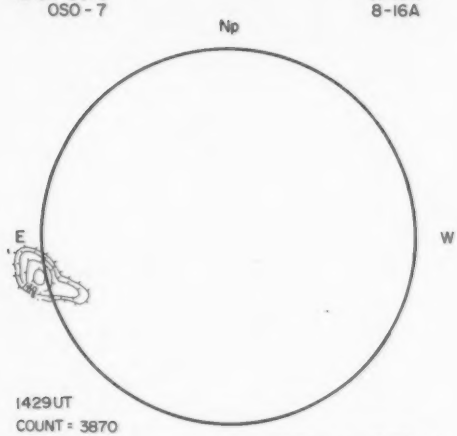
35
Jan 74

JANUARY 7, 1974 (P=-0.71, B_o=-3.72

NASA GSFC
OSO-7

X-RAY
8-16A

McMATH-HUL



1429UT
COUNT = 3870
ROLL = 8.0°
P-TH = 6.19

Counts per 0.125 sec.

1635UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

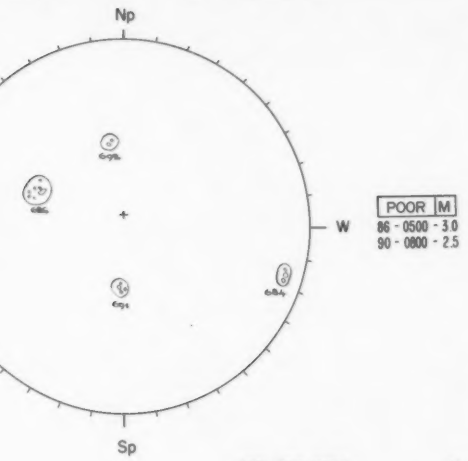
W

Sp

Contours in intervals
of 200° K

.72, L_o = 344.73)

HULBERT CALCIUM REPORT

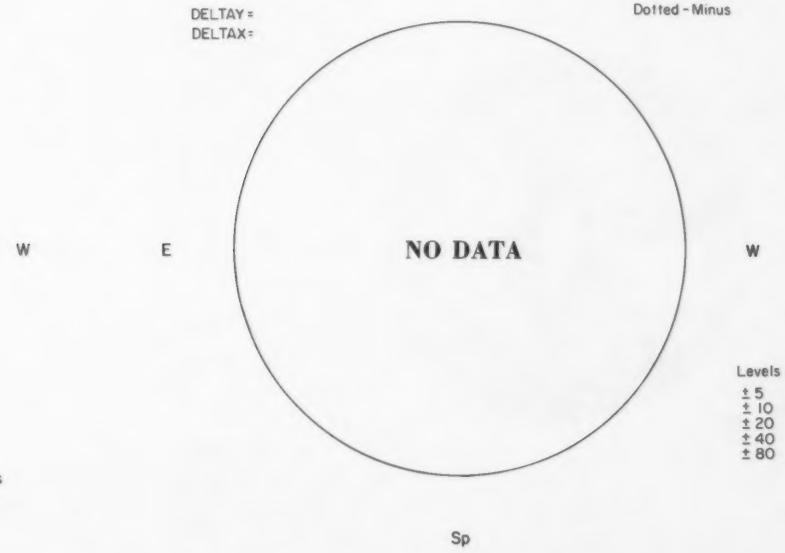


POOR	M
86 - 0500 - 3.0	
90 - 0800 - 2.5	

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

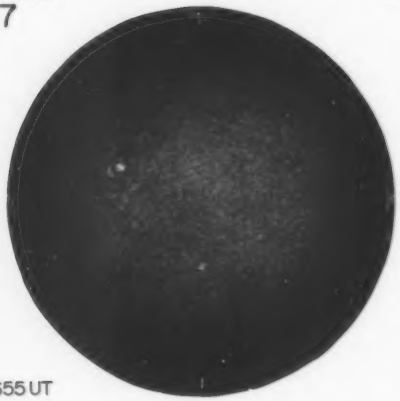
DELTAY =
DELTAX =



BOULDER
07

Np

Hα



E

W

1655 UT

Sp

BOULDER

E

1800 UT

NASA GSFC
OSO-7

E

1429 UT

Np

SUNSPOTS

W

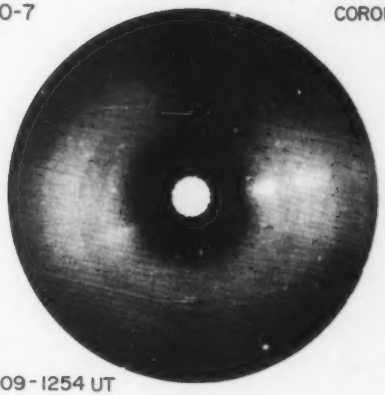
CORONA
WENDELSTEIN

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



E

W

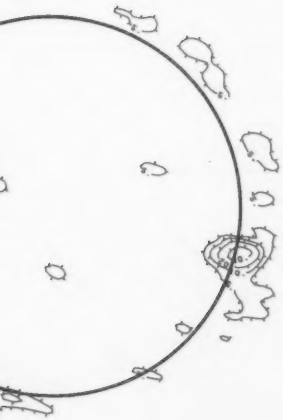
0809-1254 UT

Sp

Np

FE XV
284A

Np



W

Sp

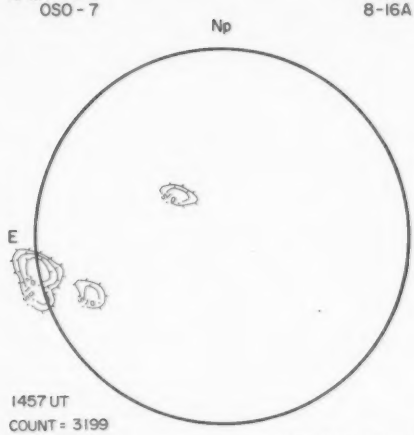
COUNT = 7992
ROLL = 8.0°
P-TH = 6.19

37
Jan 74

JANUARY 8, 1974 (P=-1.19, B_o=-3.8

NASA GSFC
OSO-7

X-RAY
8-16A



1457 UT
COUNT = 3199
ROLL = 8.1°
P-TH = 6.12

Counts per 0.125 sec.

McMATH-H

1450 UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

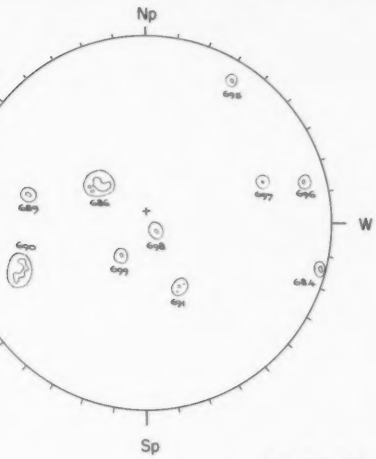
Sp

Contours in Intervals
of 200° K

-3.83, L_o = 331.56)

38
Jan 74

TH-HULBERT CALCIUM REPORT



POOR	M
86 - 0800	-3.0
94 - 1500	-2.5

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E NO DATA W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

RAMEY AFB
08

Np

Hα

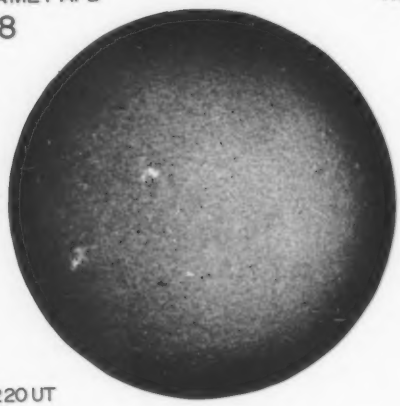
BOULDER

E

W

E

NO



1220 UT

Sp

NASA GSFC
OSO-7

E

1457 UT

Np

SUNSPOTS

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

NO DATA

W

E

NO DATA

W

CORONA
NO DATA

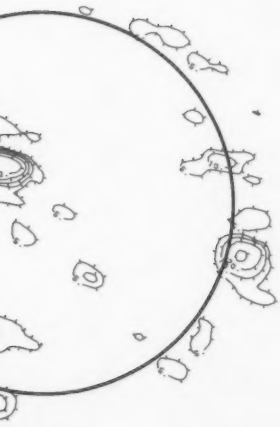
Sp

Sp

Np

FE XV
284A

Np



W

Sp

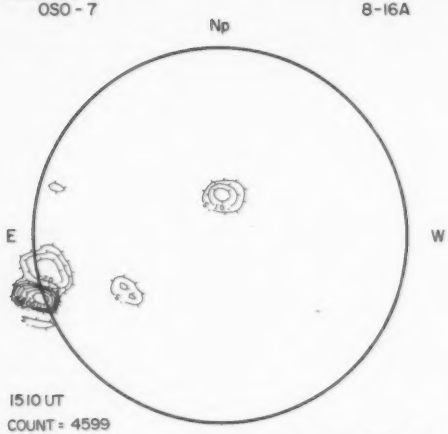
COUNT = 9439
ROLL = 8.1°
P-TH = 6.12

39
Jan 74

JANUARY 9, 1974 (P=-1.67, B_o=-3.93,

NASA GSFC
OSO-7

X-RAY
8-16A



1510 UT
COUNT = 4599
ROLL = 8.2°
P-TH = 6.05

Counts per 0.125 sec.

McMATH-HULBE

1515 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

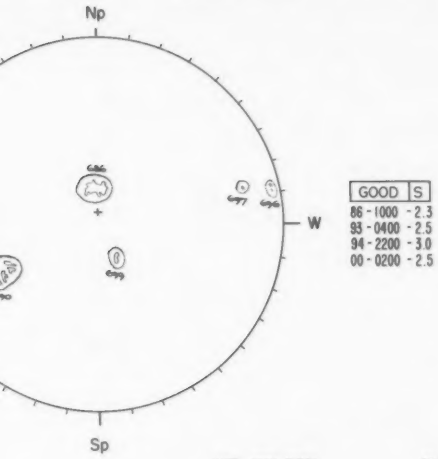
Sp

Contours in Intervals
of 200° K

3, L_o = 318.39)

40
Jan 74

LBERT CALCIUM REPORT

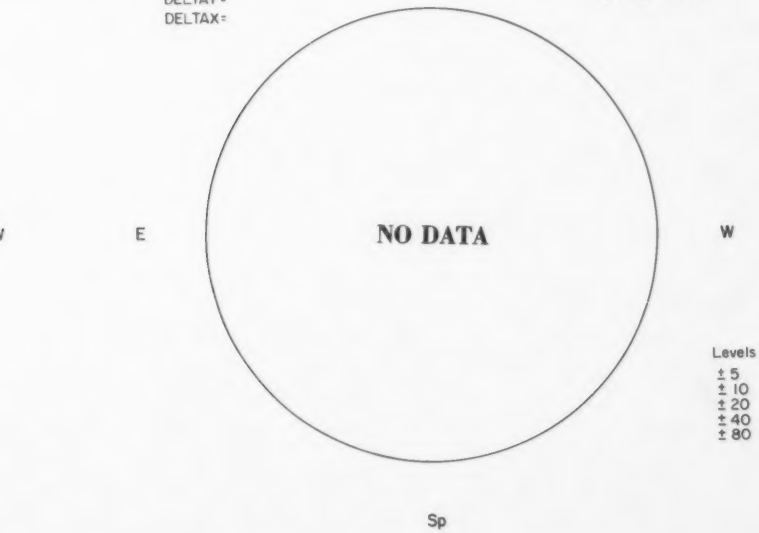


GOOD	S
86 - 1000	- 2.3
93 - 0400	- 2.5
94 - 2200	- 3.0
00 - 0200	- 2.5

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

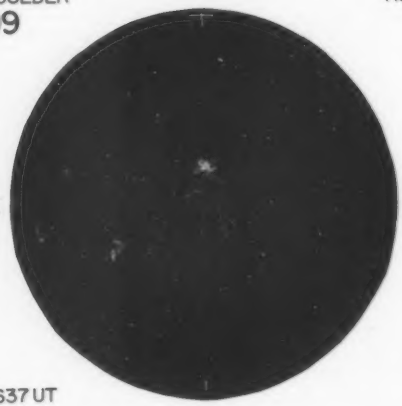


Levels
± 5
± 10
± 20
± 40
± 80

BOULDER
09

Np

Hα



Sp

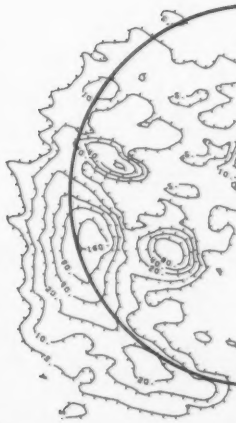
1637 UT

BOULDER

1730 UT

NASA GSFC
OSO-7

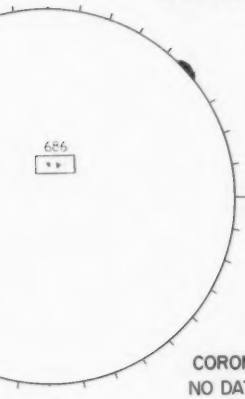
E



1510 UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

NRL
OSO-7

E

Np

WHITE-LIGHT
CORONA

NO DATA

W

Sp

Np

FE XV
284A

Np

W

Sp

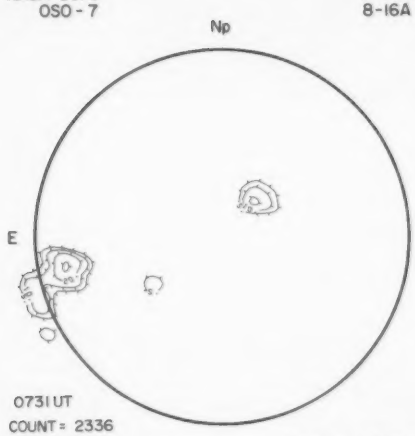
COUNT = 11709
ROLL = 8.2°
P-TH = 6.05

41
Jan 74

JANUARY 10, 1974 (P=-2.16, B_o=-4.

NASA GSFC
OSO-7

X-RAY
8-16A



0731 UT
COUNT = 2336
ROLL = 8.5°
P-TH = 6.00

Counts per 0.125 sec.

McMATH-HUL

1515 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

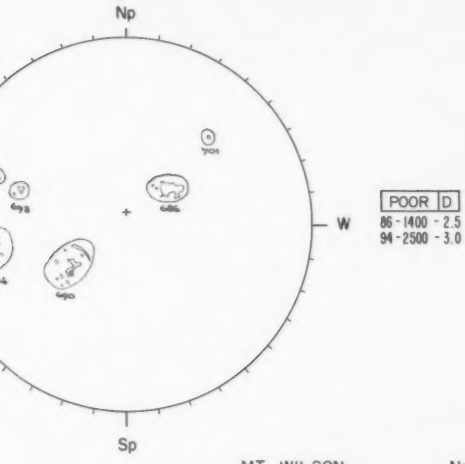
Sp

Contours in intervals
of 200° K

-4.04, L_o = 305.22)

42
Jan 74

HULBERT CALCIUM REPORT



POOR	D
86 - 1400	2.5
94 - 2500	3.0

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E NO DATA W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
10

Np

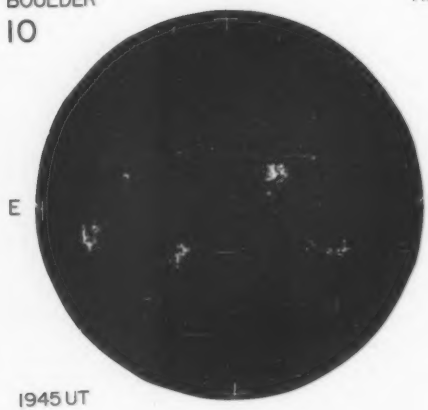
Hα

E

W

Sp

1945 UT



BOULDER

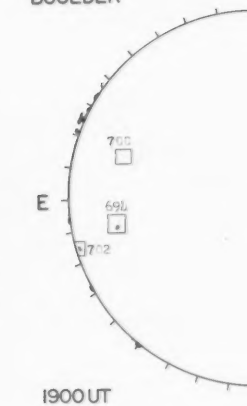
E

700

699

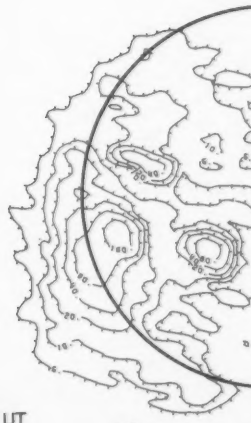
702

1900 UT



NASA GSFC
OSO-7

E

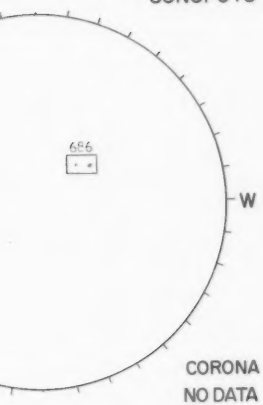


0731 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

Np

WHITE-LIGHT
CORONA

E

NO DATA

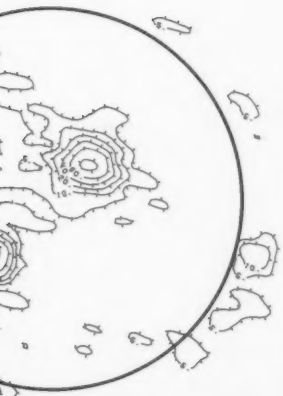
W

Sp

Np

FE XV
284A

Np



W

Sp

COUNT = 12495
ROLL = 8.5°
P-TH = 6.00

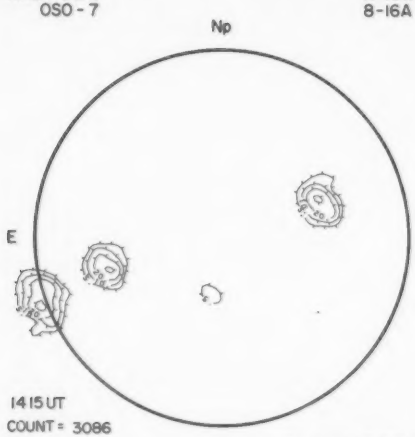
43
Jan 74

JANUARY 11, 1974 (P=-2.63, B_o=-4.

NASA GSFC
OSO-7

X-RAY
8-16A

McMATH-HUL



1415 UT
COUNT = 3086
ROLL = 9.2°
P-TH = 5.91

Counts per 0.125 sec.

1605 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

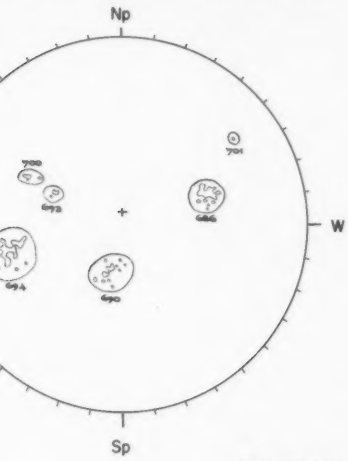
W

Sp

Contours in Intervals
of 200° K

4.15, L_o = 292.06)

HULBERT CALCIUM REPORT



POOR	S
86 - 1300	- 3.0
94 - 2100	- 3.0

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E **NO DATA** W

Levels
± 5
± 10
± 20
± 40
± 80

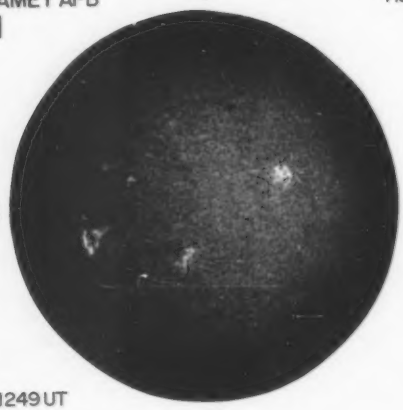
Sp

RAMEY AFB

Np

Hα

BOULDER



E

W

E

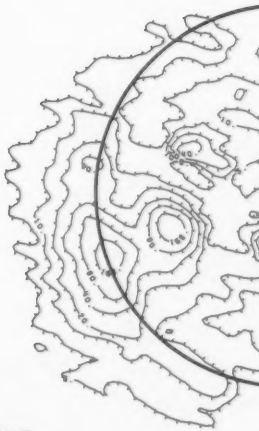
NO

1249 UT

Sp

NASA GSFC
OSO-7

E



1415 UT

Np

SUNSPOTS

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

NO DATA

W

E

NO DATA

W

CORONA

Sp

Sp

Np

FE XV
284A

Np

W

Sp

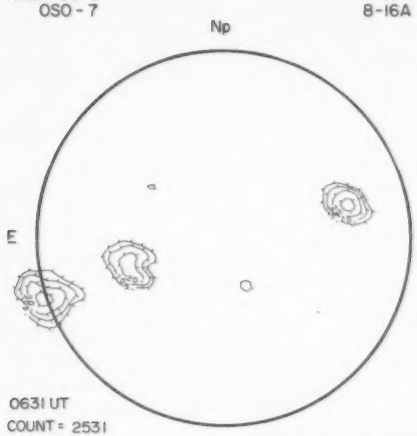
COUNT = 15132
ROLL = 9.2°
P-TH = 5.91

45
Jan 74

JANUARY 12, 1974 (P=-3.11, B_o=-4.2

NASA GSFC
OSO-7

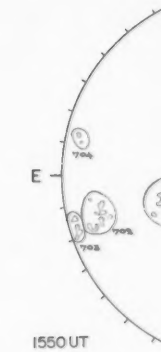
X-RAY
8-16A



0631 UT
COUNT = 2531
ROLL = 9.6°
P-TH = 5.86

Counts per 0.125 sec.

McMATH-HUL



1550 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

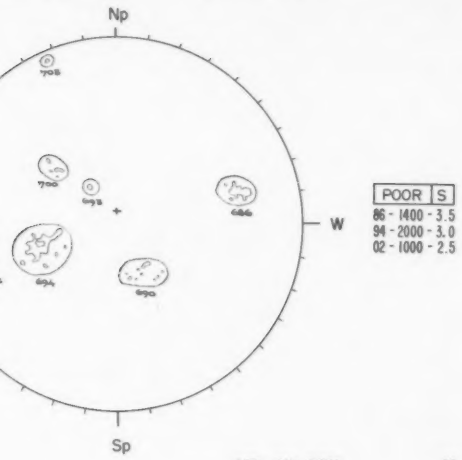
W

Sp

Contours in Intervals
of 200° K

4.25, L_o = 278.89)

HULBERT CALCIUM REPORT



POOR	S
86 - 1400 - 3.5	
94 - 2000 - 3.0	
02 - 1000 - 2.5	

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E

NO DATA

W

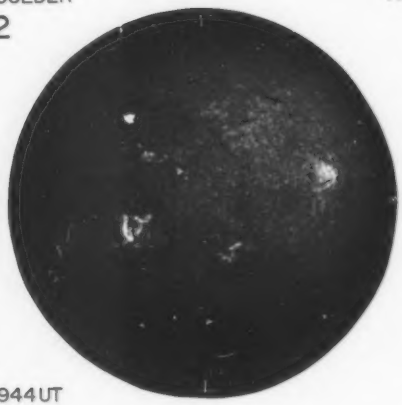
Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER

12

Np



E

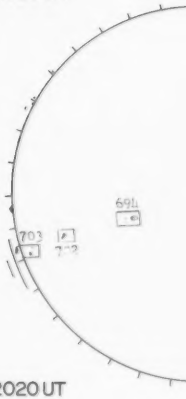
W

Sp

1944 UT

Hα

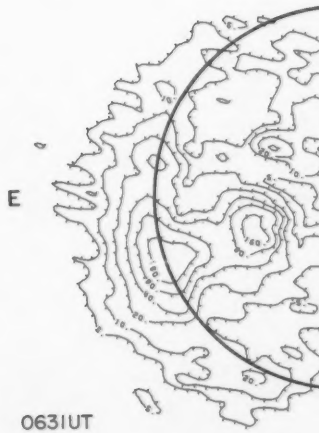
BOULDER



2020 UT

NASA GSFC

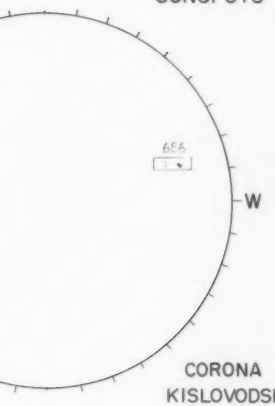
OSO-7



0631 UT

Np

SUNSPOTS



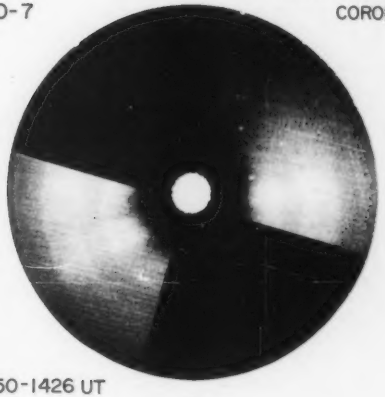
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



1250-1426 UT

Sp

Np

FE XV
284A

Np

W

Sp

COUNT = 16751
ROLL = 9.6°
P-TH = 5.86

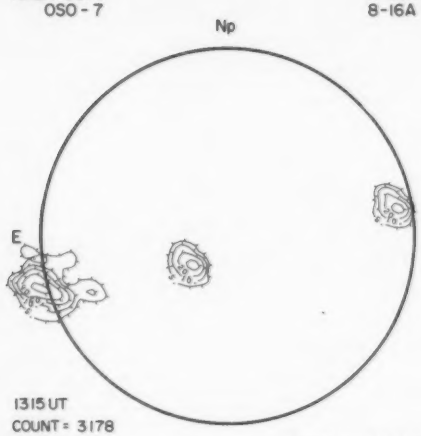
47
Jan 74

JANUARY 13, 1974 (P=-3.79, B_o=-4.36

NASA GSFC
OSO-7

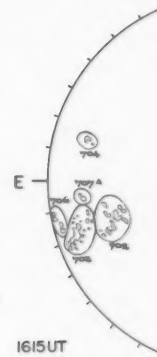
X-RAY
8-16A

McMATH-HULBE



1315 UT
COUNT = 3178
ROLL = 10.2°
P-TH = 5.76

Counts per 0.125 sec.



1615 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

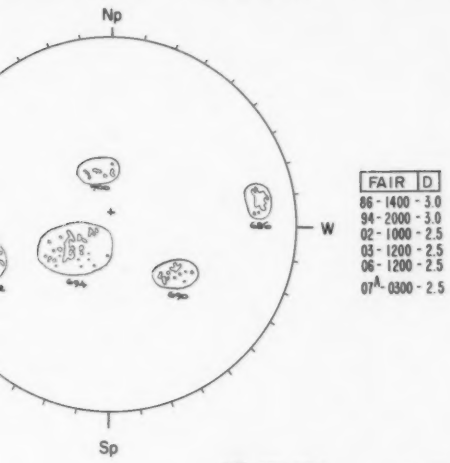
W

Sp

Contours in Intervals
of 200° K

.36, L_o = 265.72)

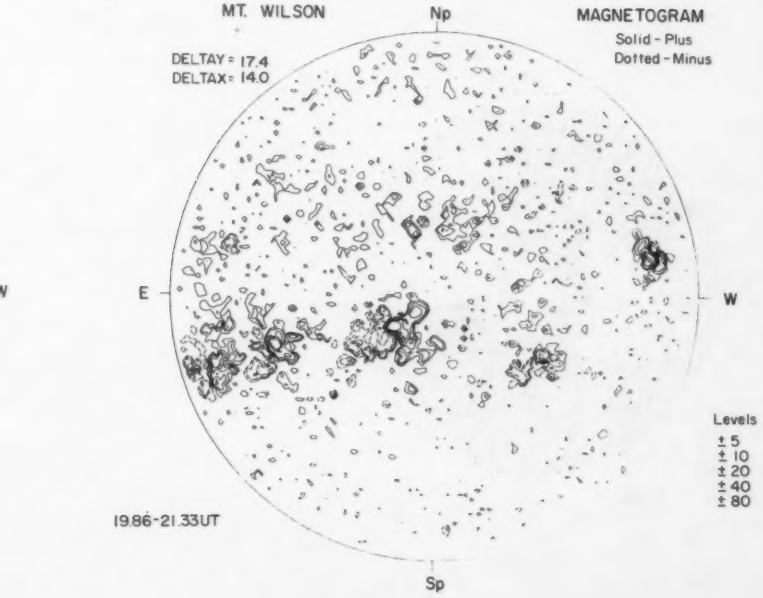
ULBERT CALCIUM REPORT



FAIR	D
86 - 1400 - 3.0	
94 - 2000 - 3.0	
02 - 1000 - 2.5	
03 - 1200 - 2.5	
06 - 1200 - 2.5	
07A - 0300 - 2.5	

MT. WILSON

DELTAY = 17.4
DELTAX = 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

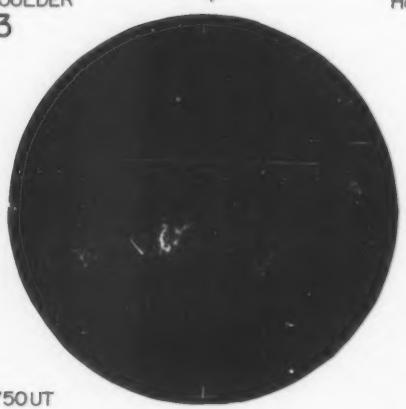
Levels
± 5
± 10
± 20
± 40
± 80

19.86-21.33UT

BOULDER
13

Np

Hα



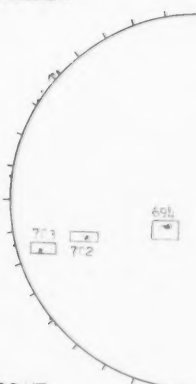
E

W

1750 UT

Sp

BOULDER



E

1800 UT

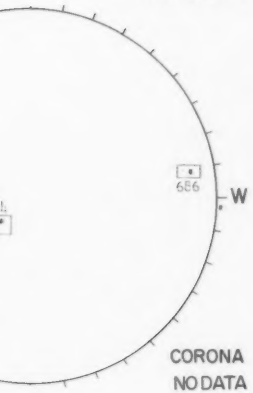
NASA GSFC
OSO-7

E

1315 UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

NRL
OSO-7

Np

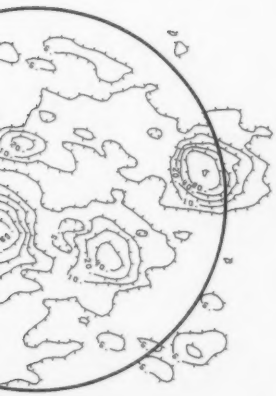
WHITE-LIGHT
CORONA

0643-0818 UT

Sp

FE XV
284A

Np



W

Sp

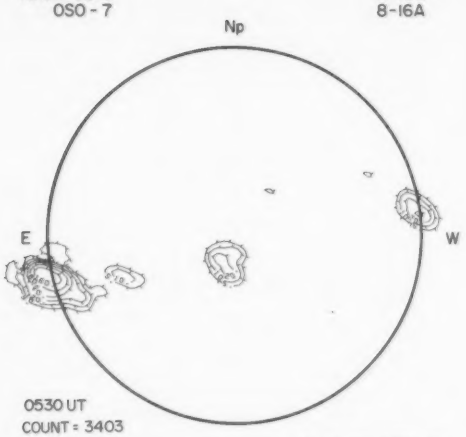
COUNT = 17426
ROLL = 10.2°
P-TH = 5.76

49
Jan 74

JANUARY 14, 1974 (P=-4.06, B_o=-4.

NASA GSFC
OSO-7

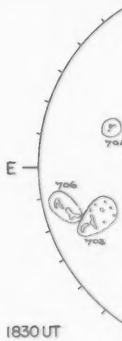
X-RAY
8-16A



0530 UT
COUNT = 3403
ROLL = 10.6°
P-TH = 5.70

Counts per 0.125 sec.

McMATH-HU



1830 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

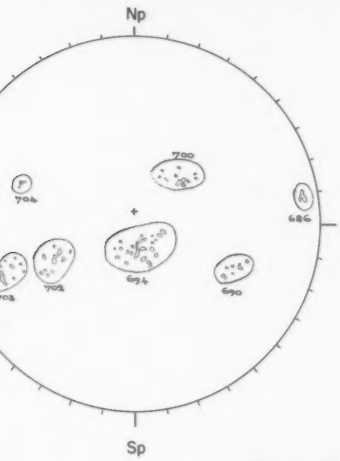
Sp

Contours in Intervals
of 200° K

-4.46, L_o = 252.55)

50
Jan 74

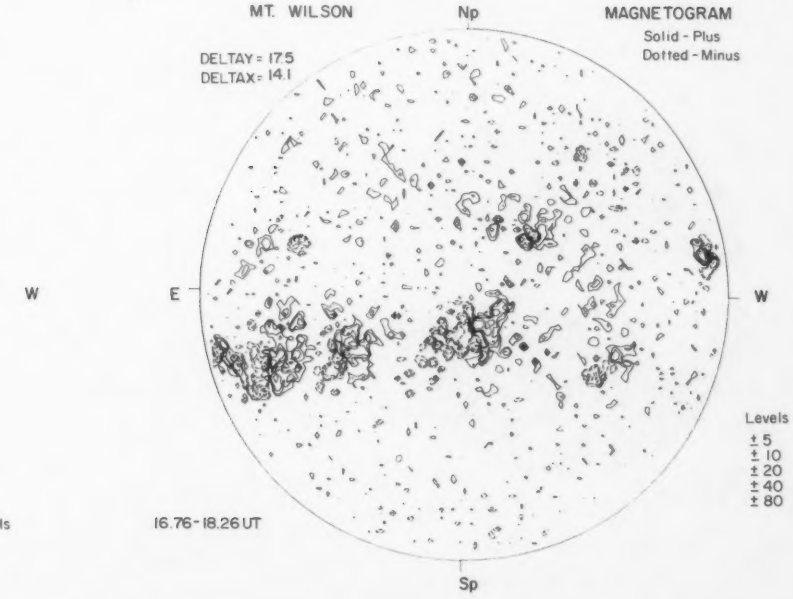
-HULBERT CALCIUM REPORT



VPOOR	S
86 - 0800	- 2.5
94 - 1800	- 3.0
00 - 0700	- 3.0
03 - 1000	- 2.5
06 - 1500	- 3.0

MT. WILSON

DELTAY = 17.5
DELTAX = 14.1



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

16.76 - 18.26 UT

RAMEY AFB
14

Np

Hα

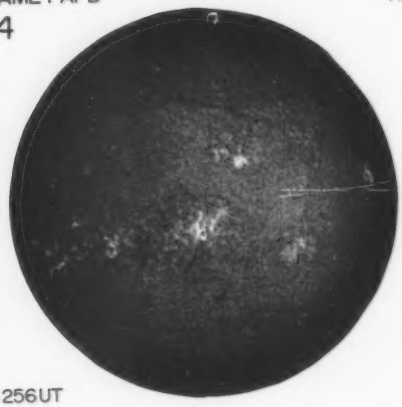
BOULDER

E

W

E

NO



1256UT

Sp

NASA GSFC
OSO - 7

E

0530UT

Np

SUNSPOTS

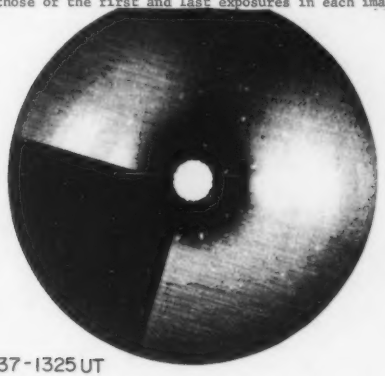
"After June 14th each corona picture is a composite made from several partial images, or an averaged image made from double or multiple exposures. The times given are those of the first and last exposures in each image."

O DATA

W

E

W



CORONA

0837-1325 UT

Sp

Sp

FE XV
284A

Np

W

Sp

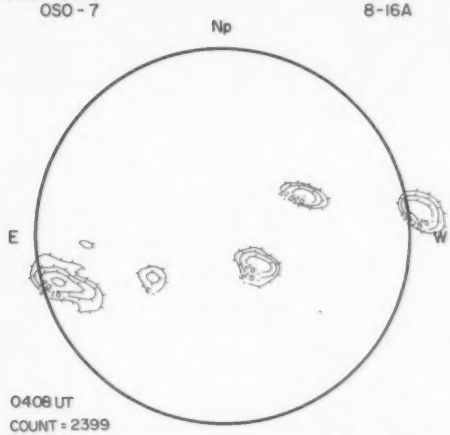
COUNT = 18943
ROLL = 10.6°
P-TH = 5.70

51
Jan 74

JANUARY 15, 1974 (P=-4.53, B_o=-4

NASA GSFC
OSO-7

X-RAY
8-16A



0408 UT
COUNT = 2399
ROLL = 11.7°
P-TH = 5.63

Counts per 0.125 sec.

McMATH-HU

1600 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

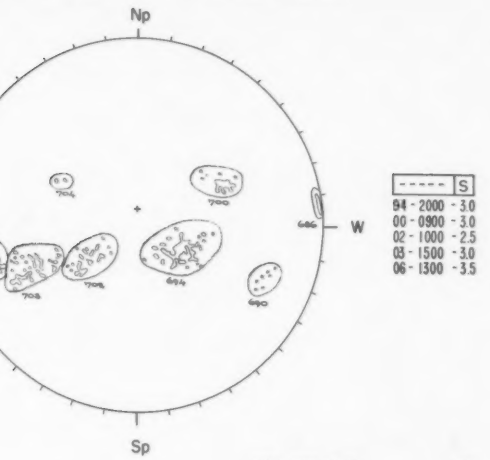
E

Sp

Contours in Intervals
of 200° K

=-4.56, L_o = 239.38)

H-HULBERT CALCIUM REPORT

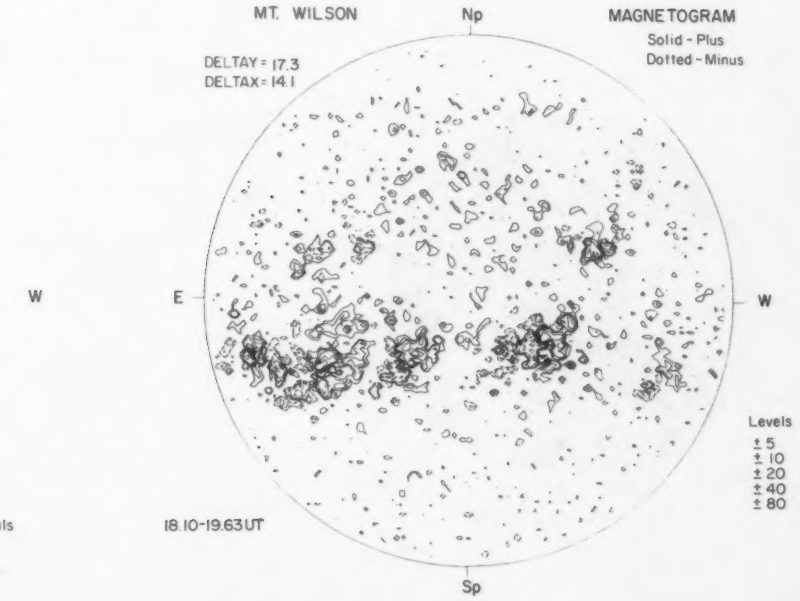


	S
94 - 2000	- 3.0
00 - 0900	- 3.0
02 - 1000	- 2.5
03 - 1500	- 3.0
06 - 1300	- 3.5

MT. WILSON MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY = 17.3
DELTAX = 14.1



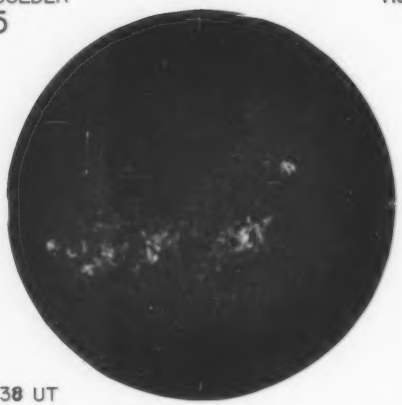
Levels
± 5
± 10
± 20
± 40
± 80

18.10-19.63 UT

BOULDER
15

Np

Hα



E

W

1738 UT

Sp

BOULDER

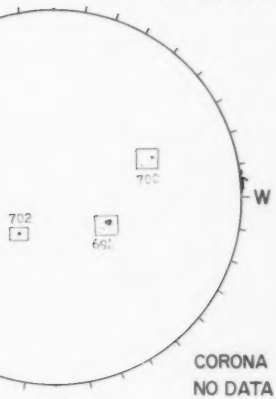
2020 UT

NASA GSFC
OSO-7

0408 UT

Np

SUNSPOTS



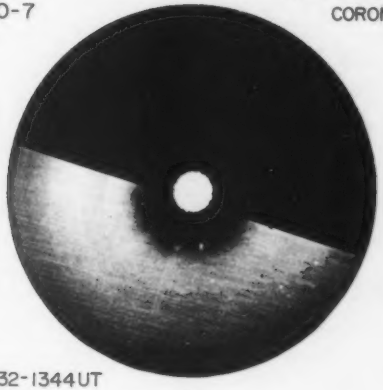
CORONA
NO DATA

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



1032-1344 UT

Sp

Np

FE XV
284A

W

Sp

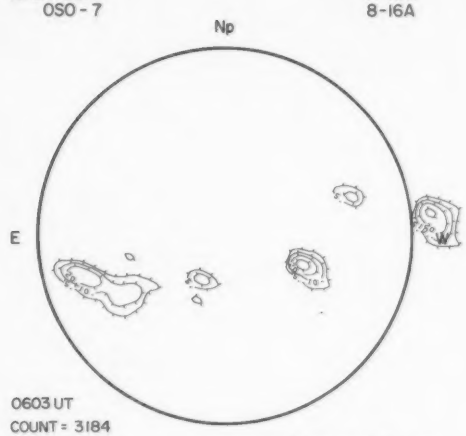
COUNT = 18992
ROLL = 11.7°
P-TH = 5.63

53
Jan 74

JANUARY 16, 1974 (P=-5.00, B_o=-4

NASA GSFC
OSO-7

X-RAY
8-16A



0603 UT
COUNT = 3184
ROLL = 12.3°
P-TH = 5.54

Counts per 0.125 sec.

McMATH-HU

1530 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

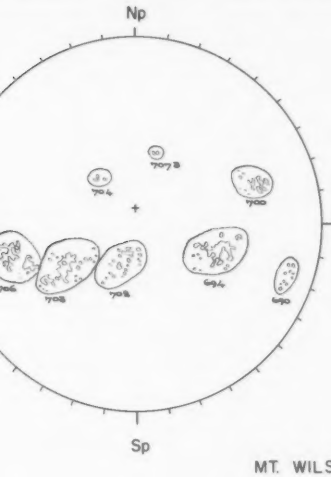
E

Sp

Contours in intervals
of 200° K

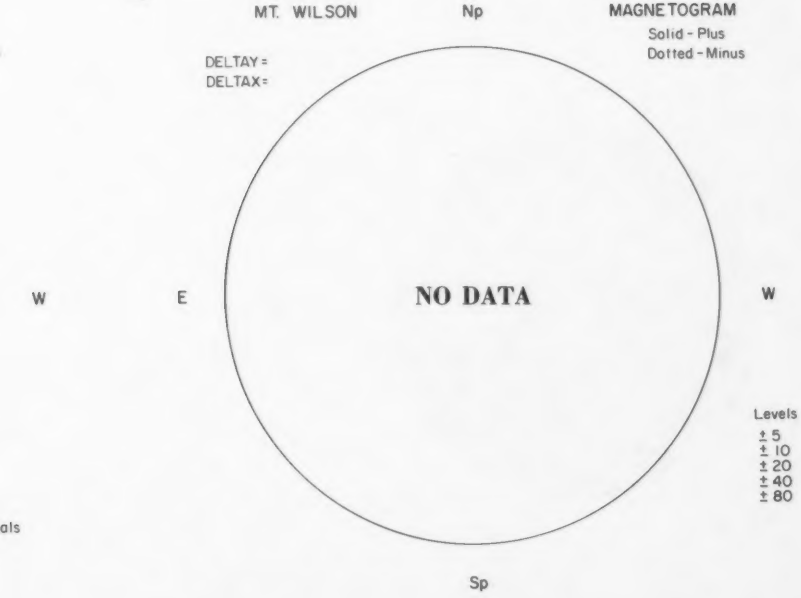
-4.66, L_o = 226.22

I-HULBERT CALCIUM REPORT



FAIR	M
94 - 2000 - 3.5	
00 - 0900 - 3.0	
02 - 0800 - 2.5	
03 - 1700 - 2.5	
06 - 1800 - 3.0	
07 - 0200 - 2.5	B

MT. WILSON



MAGNETOGRAM

Solid - Plus
Dotted - Minus

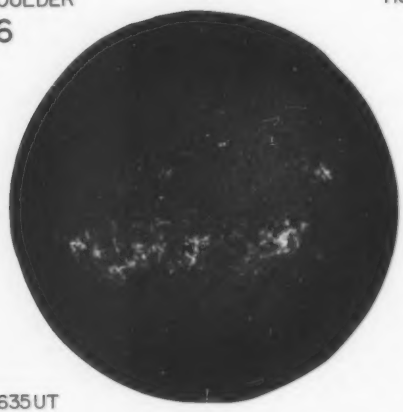
Levels
± 5
± 10
± 20
± 40
± 80

als

BOULDER
16

Np

Hα



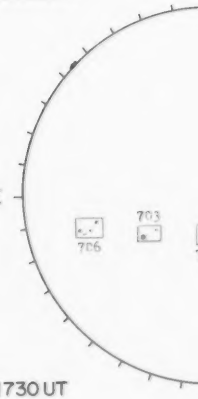
E

W

Sp

1635 UT

BOULDER



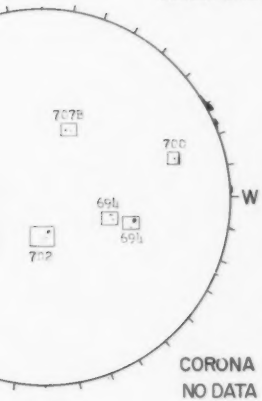
1730 UT

NASA GSFC
OSO-7

0603 UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

W

0736-0913 UT

Sp

Np

FE XV
284A

Np

W

Sp

COUNT = 19356
ROLL = 12.3°
P-TH = 5.54

55
Jan 74

JANUARY 17, 1974 (P=-5.47, B_o=-4.76,

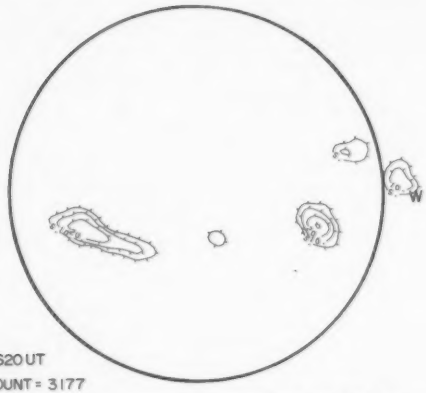
NASA GSFC
OSO-7

X-RAY
8-16A

Np

E

W



0620 UT
COUNT = 3177
ROLL = 12.3°
P-TH = 5.46

Sp

Counts per 0.125 sec.

CATANIA

0840 UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

W

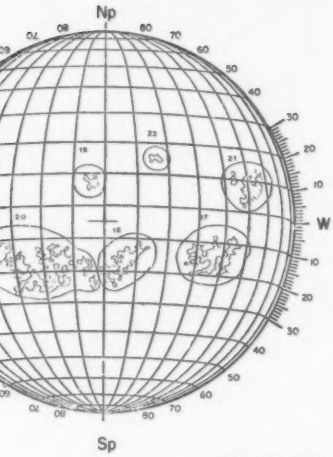
Sp

Contours in Intervals
of 200° K

76, L_o = 213.05)

56
Jan 74

CALCIUM REPORT



POOR	SS
21 - 2879	---
17 - 4082	---
23 - 0219	---
18 - 2034	---
19 - 0436	---
20 - 4286	---
22 - 1570	---

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E

NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
17

Np

Hα

E

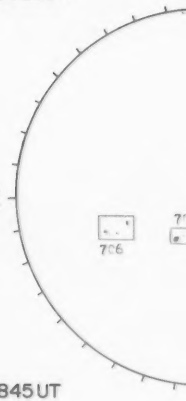
W

1710 UT

Sp

BOULDER

E



1845 UT

NASA GSFC
OSO-7

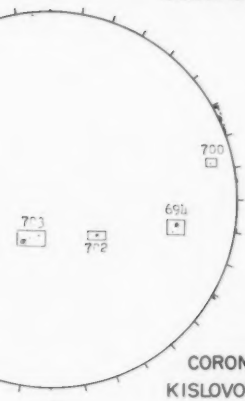
E

0620 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
KISLOVODSK

Sp

Np

WHITE-LIGHT
CORONA

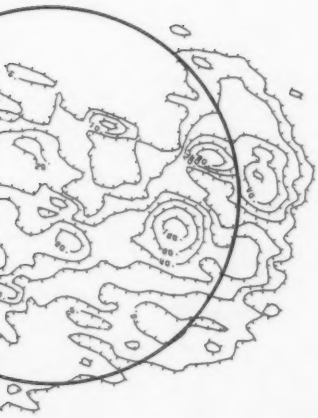
NO DATA

W

Sp

Np

FE XV
284A



W

Sp

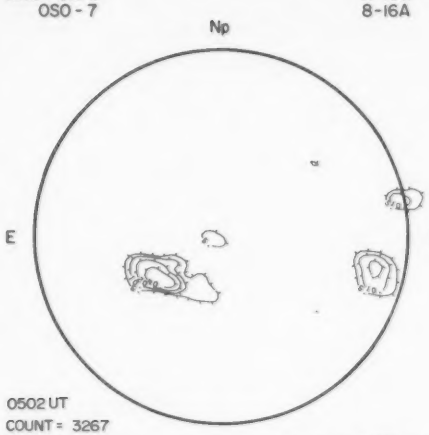
COUNT = 17635
ROLL = 12.3°
P-TH = 5.46

57
Jan 74

JANUARY 18, 1974 (P=-5.93, B_o=-4.8

NASA GSFC
OSO-7

X-RAY
8-16A



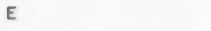
0502 UT
COUNT = 3267
ROLL = 11.9°
P-TH = 5.37

Counts per 0.125 sec.

CATANIA

0945UT

PROSPECT HILL
AFCRL

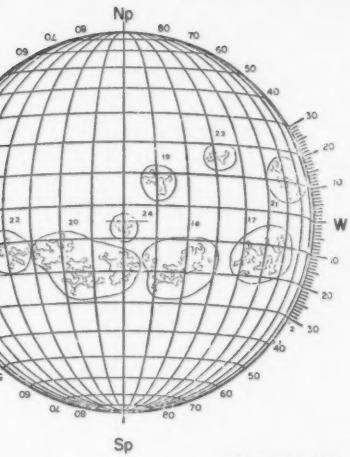


8.6 mm

Contours in Intervals
of 200° K

.85, L_o = 199.88)

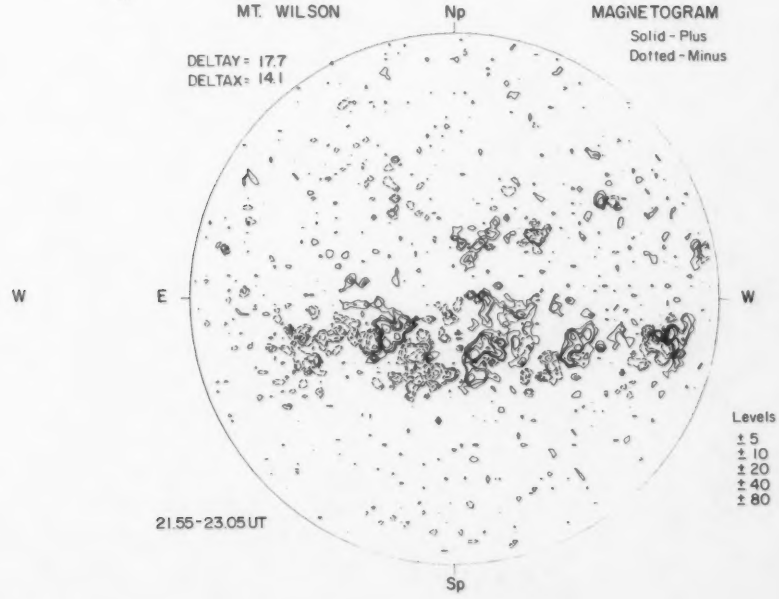
CALCIUM REPORT



FAIR	EC
21 - 2708	---
17 - 3960	---
18 - 3414	---
19 - 0943	---
20 - 5513	---

MT. WILSON

DELTAY = 17.7
DELTAX = 14.1



MAGNETOGRAM
Solid - Plus
Dotted - Minus

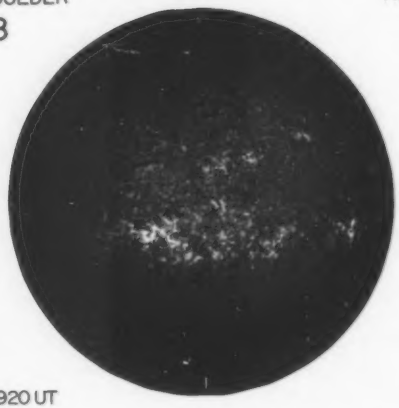
Levels
± 5
± 10
± 20
± 40
± 80

21.55 - 23.05 UT

BOULDER
18

Np

Hα



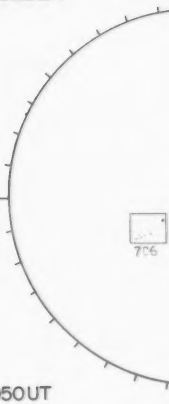
E

W

Sp

1920 UT

BOULDER



E

1950 UT

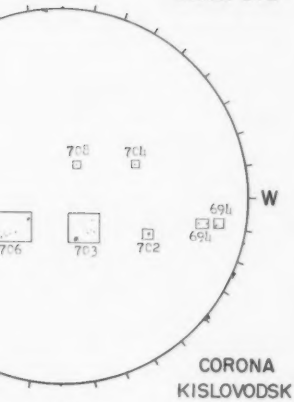
NASA GSFC
OSO - 7

E

0502 UT

Np

SUNSPOTS



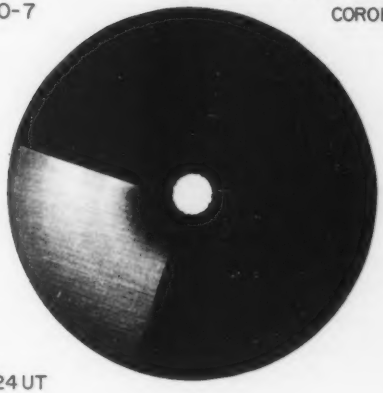
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



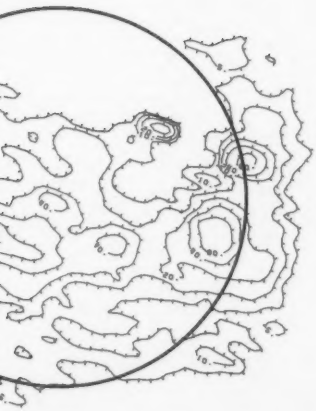
1124 UT

Sp

Np

FE XV
284A

Np



W

Sp

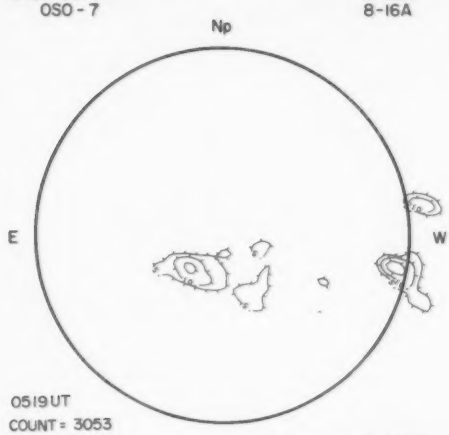
COUNT = 12473
ROLL = 11.9°
P-TH = 5.37

59
Jan 74

JANUARY 19, 1974 (P=-6.39, B_o=-4.9

NASA GSFC
OSO-7

X-RAY
8-16A



0519 UT
COUNT = 3053
ROLL = 10.9°
P-TH = 5.29

Counts per 0.125 sec.

McMATH-HU

1800 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

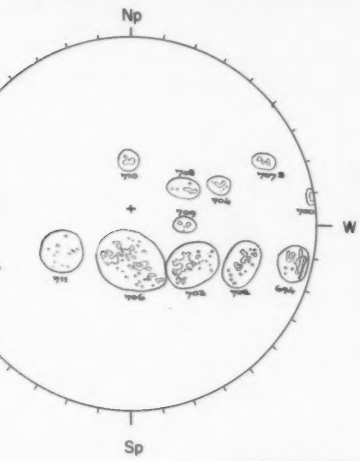
Sp

Contours in Intervals
of 200° K

-4.95, L_o = 186.71)

60
Jan 74

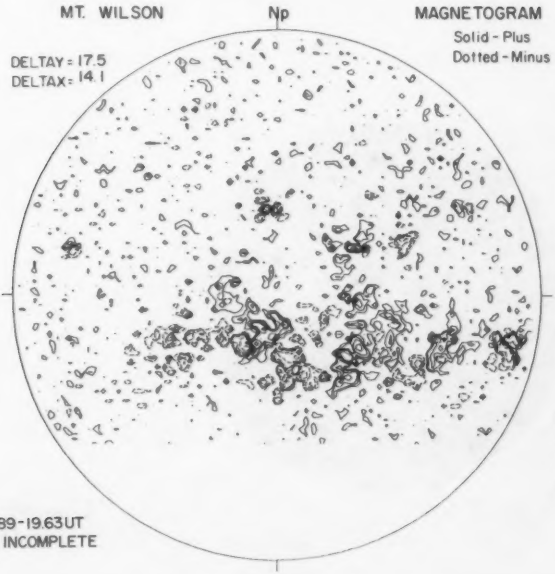
-HULBERT CALCIUM REPORT



FAIR	M
94 - 1500 - 3.0	
03 - 1400 - 2.5	
06 - 1700 - 3.0	
08 - 0300 - 2.5	
10 - 0300 - 2.5	

MT. WILSON

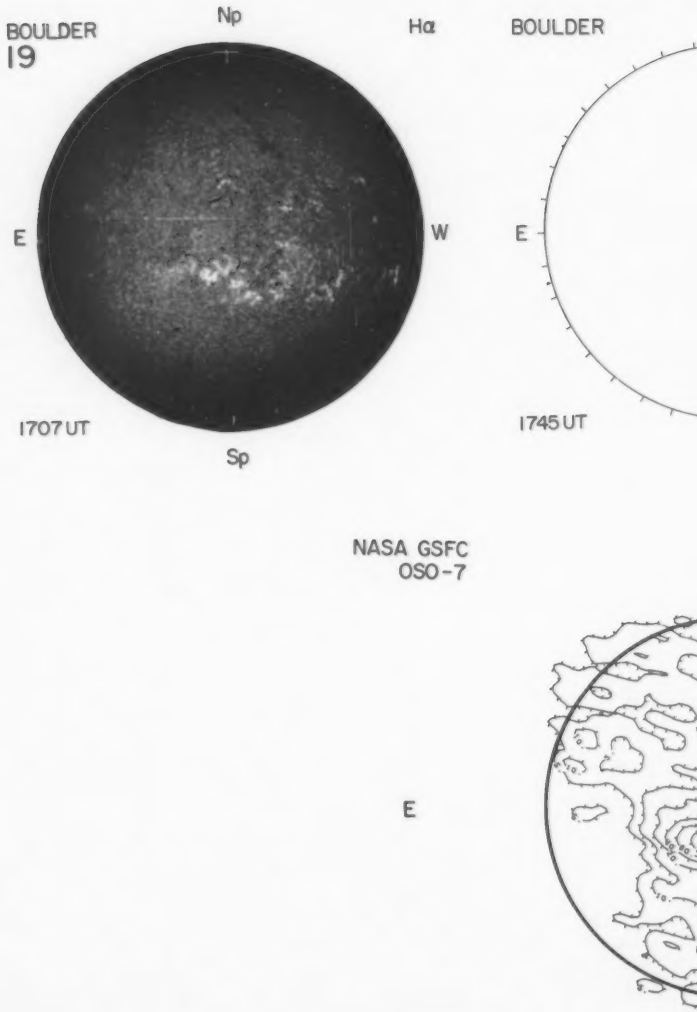
DELTAY = 17.5
DELTAX = 14.1



MAGNETOGRAM
Solid - Plus
Dotted - Minus

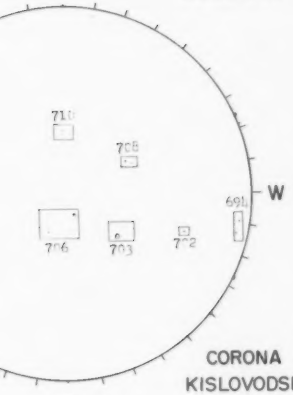
Levels
± 5
± 10
± 20
± 40
± 80

16.89-19.63 UT
DATA INCOMPLETE


BOULDER
19
Np
Hα
E
W
Sp
1707 UT
BOULDER
E
1745 UT
NASA GSFC
OSO-7
E
0519 UT

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

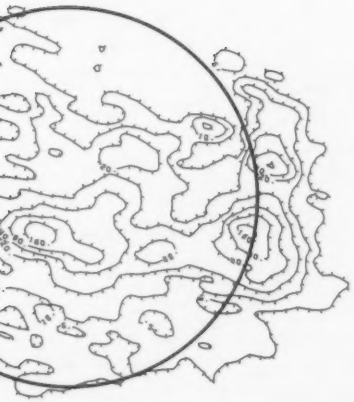
WHITE-LIGHT
CORONA

1006-1142 UT

Sp

Np

FE XV
284A



W

Sp

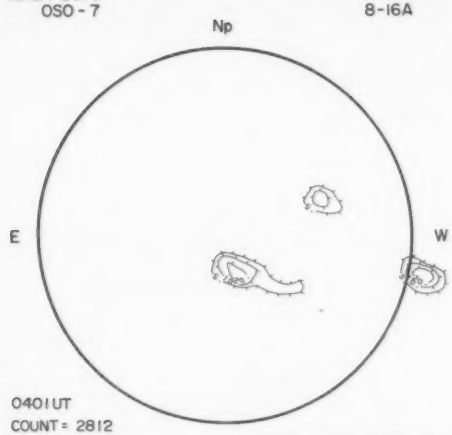
COUNT = 13852
ROLL = 10.9°
P-TH = 5.29

61
Jan 74

JANUARY 20, 1974 (P=-6.85, B_o=-5.04

NASA GSFC
OSO-7

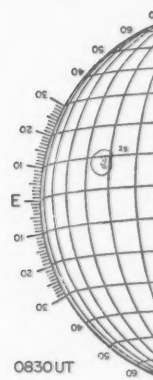
X-RAY
8-16A



0401UT
COUNT = 2812
ROLL = 8.4°
P-TH = 5.20

Counts per 0.125 sec.

CATANIA



0830UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

W

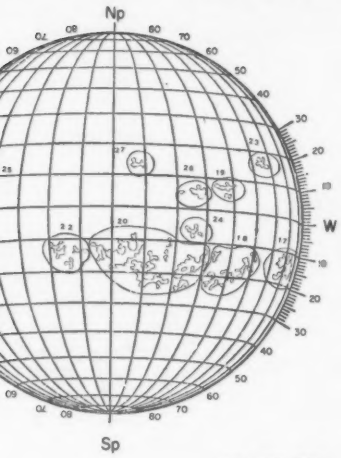
Sp

Contours in Intervals
of 200° K

.04, L_o = 173.55)

62
Jan 74

CALCIUM REPORT



FAIR	SS
17 - 2574 ---	
18 - 1858 ---	
19 - 0540 ---	
20 - 5956 ---	

MT. WILSON

Np

MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E

NO DATA

W

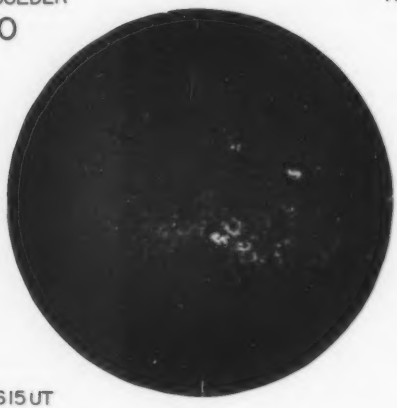
Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
20

Np

Hα



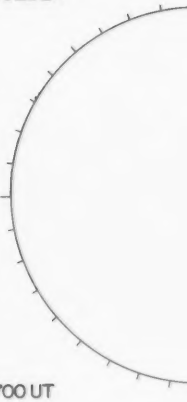
E

W

Sp

1615 UT

BOULDER



E

1700 UT

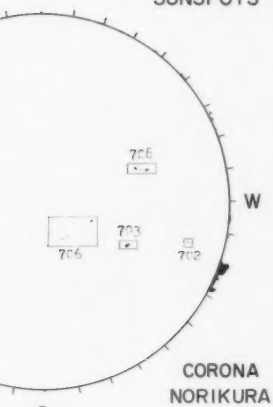
NASA GSFC
OSO-7

E

0401 UT

Np

SUNSPOTS



CORONA
NORIKURA

NRL
OSO-7

Np

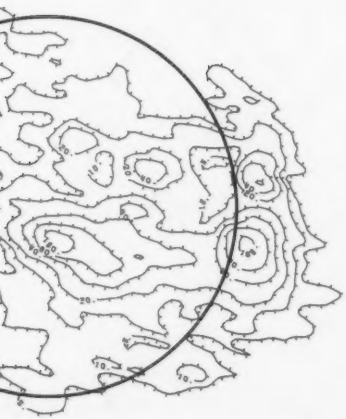
WHITE-LIGHT
CORONA

0852-1023 UT

Np

FE XV
284A

Np



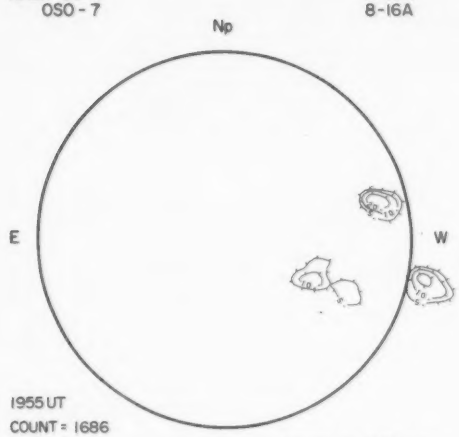
COUNT = 13746
ROLL = 8.5°
P-TH = 6.01

63
Jan 74

JANUARY 21, 1974 (P=-7.31, B_o=-5.13

NASA GSFC
OSO-7

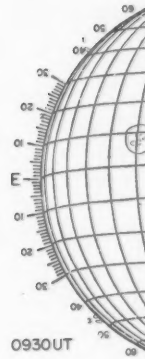
X-RAY
8-16A



1955 UT
COUNT = 1686
ROLL = 4.5°
P-TH = 5.05

Counts per 0.125 sec.

CATANIA



0930 UT

PROSPECT HILL
AFCRL

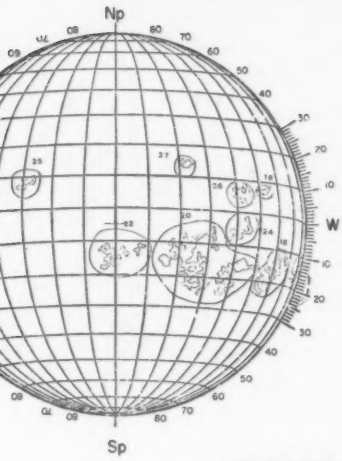
8.6 mm

Contours in Intervals of 200° K

.13, L_o = 160.38)

64
Jan 74

CALCIUM REPORT



FAIR	GD
17-1078	---
18-2253	---
19-0300	---
26-0990	---
20-6342	---

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E **NO DATA** W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
21

Np

Hα

CULGOORA

E

NO DATA

W

E

2220 UT

Sp

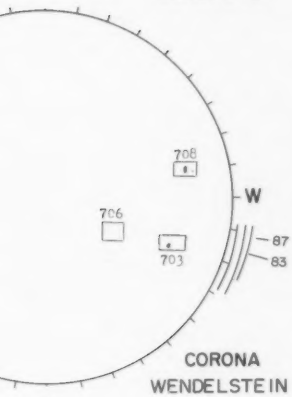
NASA GSFC
OSO-7

E

1955 UT

Np

SUNSPOTS



CORONA
WENDELSTEIN

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

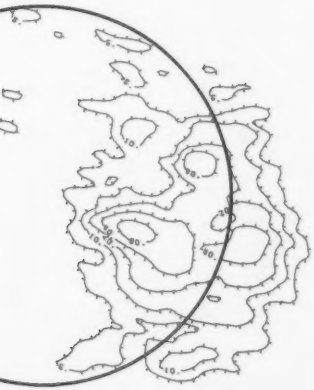
0551-0904 UT

Sp

Np

FE XV
284A

Np



W

Sp

COUNT = 7885
ROLL = 4.5°
P-TH = 5.05

65
Jan 74

JANUARY 22, 1974 (P=-7.76, B_o=-5.2

NASA GSFC
OSO-7

X-RAY
8-16A

Np

E

W

Sp

2156 UT
COUNT = 3388
ROLL = 2.5°
P-TH = 4.95

Counts per 0.125 sec.

CATANIA

E

0917 UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

W

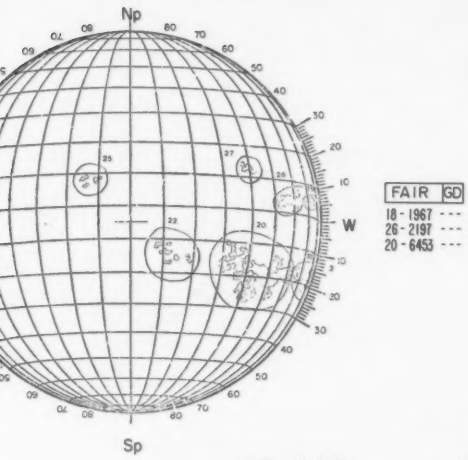
Sp

Contours in Intervals
of 200° K

5.22, L_o = 147.22)

66
Jan 74

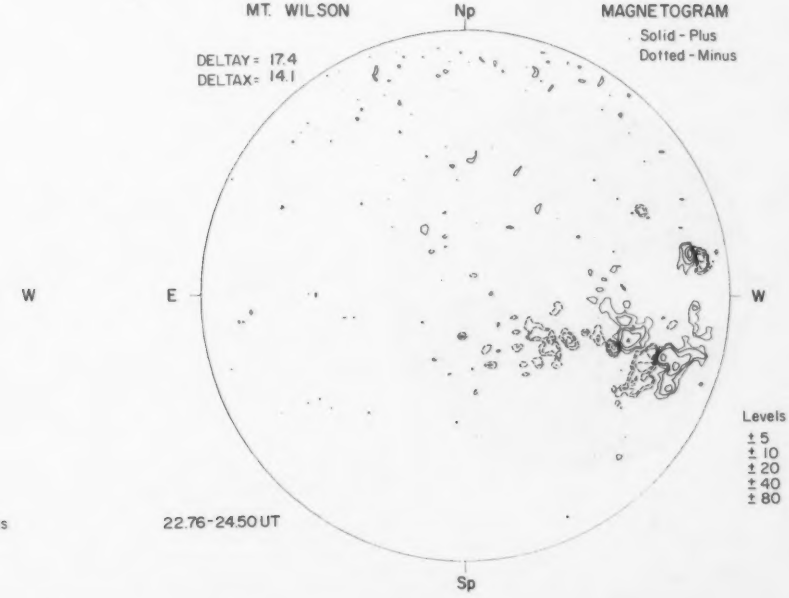
CALCIUM REPORT



FAIR	GD
18 - 1967	---
26 - 2197	---
20 - 6453	---

MT. WILSON

DELTAY = 17.4
DELTAX = 14.1



MAGNETOGRAM

Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

22.76-24.50 UT

BOULDER
22

Np

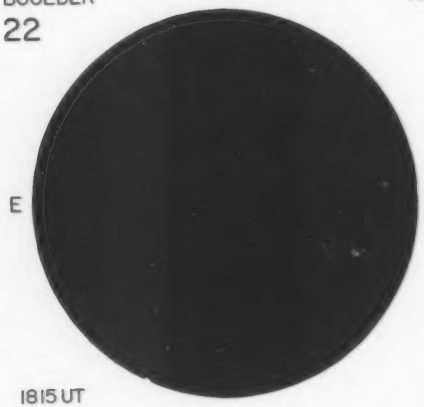
Hα

E

W

Sp

1815 UT



BOULDER

Np

E

1730 UT

S

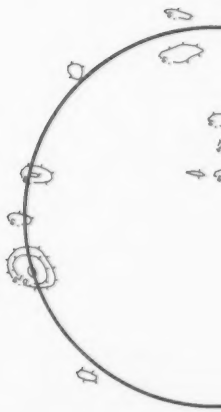
NASA GSFC
OSO - 7

Np

E

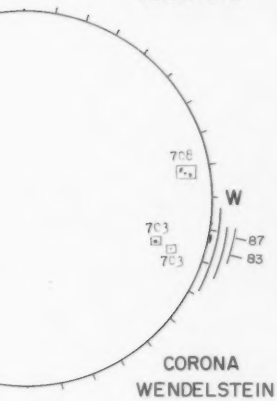
2156 UT

Sp



Np

SUNSPOTS



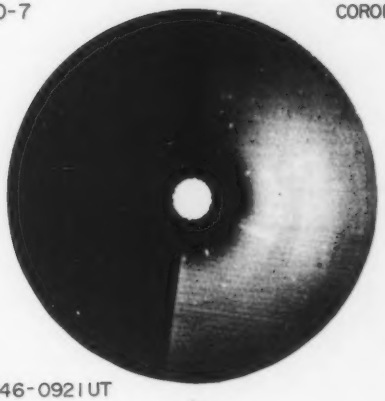
CORONA
WENDELSTEIN

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



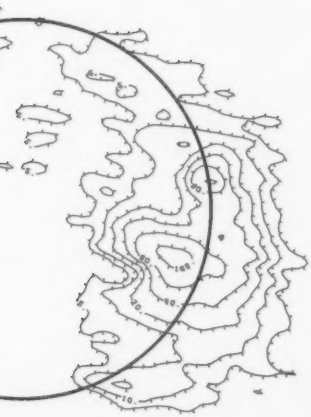
0746-0921 UT

Sp

Np

Np

FE XV
284A



W

Sp

COUNT = 11286
ROLL = 2.5°
P-TH = 4.95

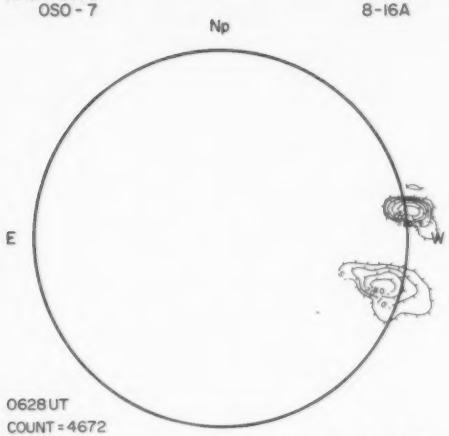
67
Jan 74

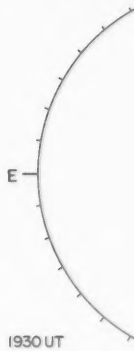
JANUARY 23, 1974 (P=-8.21, B_o=-5.3

NASA GSFC
OSO-7

X-RAY
8-16A

McMATH-HUL





0628 UT
COUNT = 4672
ROLL = 2.1°
P-TH = 4.92

Counts per 0.125 sec.

1930 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

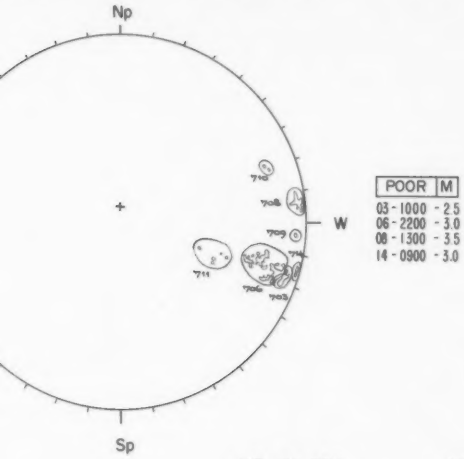
Sp

Contours in Intervals
of 200° K

5.31, L_o = 134.05)

68
Jan 74

HULBERT CALCIUM REPORT

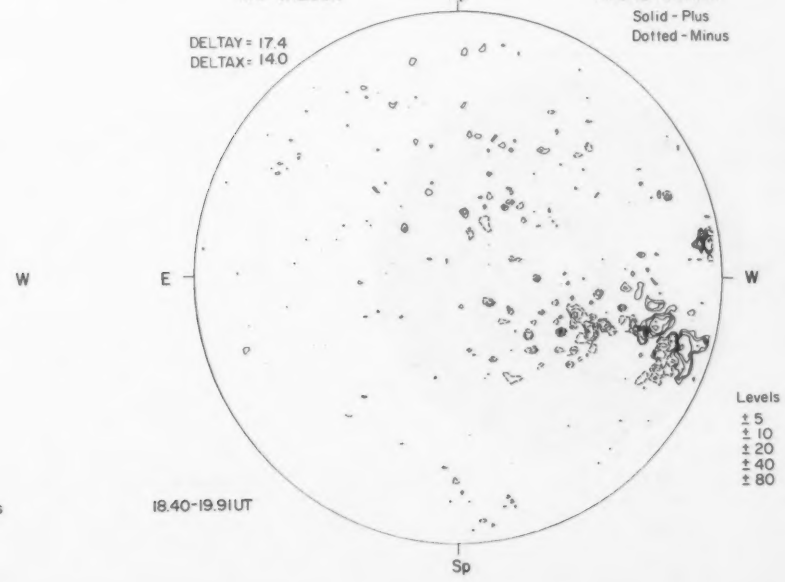


POOR	M
03 - 1000	- 2.5
06 - 2200	- 3.0
08 - 1300	- 3.5
14 - 0900	- 3.0

MT. WILSON MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY = 17.4
DELTAX = 14.0



Levels
± 5
± 10
± 20
± 40
± 80

18.40-19.91UT

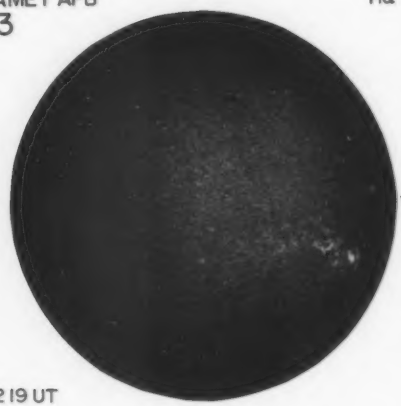
RAMEY AFB
23

Np

Hα

E

W



1219 UT

Sp

CULGOORA

Np

E

2105 UT

Sp

NASA GSFC
OSO-7

Np

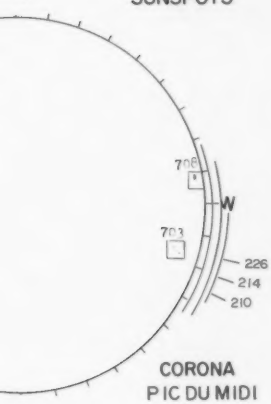
E

0628 UT

S

Np

SUNSPOTS



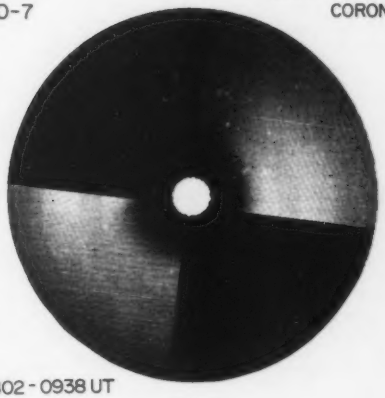
CORONA
PIC DU MIDI

Sp

NRL
OSO-7

Np

WHITE - LIGHT
CORONA

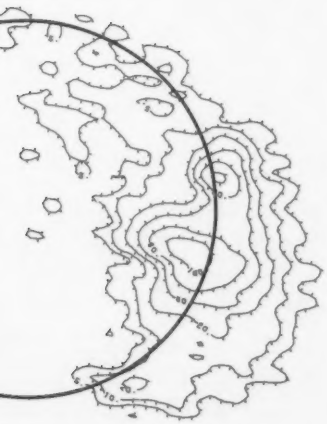


0802 - 0938 UT

Sp

FE XV
284A

Np



W

Sp

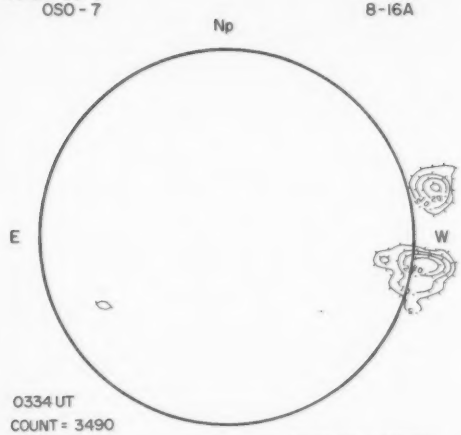
COUNT = 12602
ROLL = 2.1°
P-TH = 4.92

69
Jan 74

JANUARY 24, 1974 (P=-8.65, B_o=-5.4

NASA GSFC
OSO-7

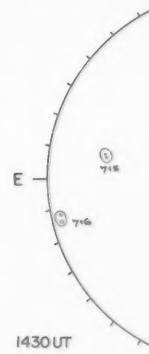
X-RAY
8-16A



0334 UT
COUNT = 3490
ROLL = 1.5°
P-TH = 4.83

Counts per 0.125 sec.

McMATH-HULB



1430 UT

PROSPECT HILL
AFCRL

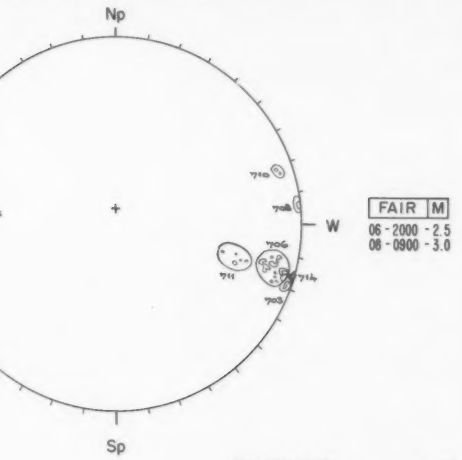
8.6 mm

Contours in Intervals
of 200° K

.40, L_o = 120.88)

70
Jan 74

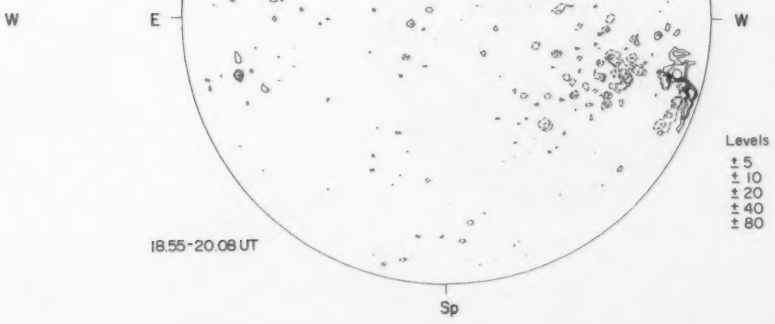
HULBERT CALCIUM REPORT



FAIR	M
06 - 2000 - 2.5	
06 - 0900 - 3.0	

MT. WILSON

DELTAY = 17.2
DELTAX = 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

18.55-20.08 UT

RAMEY AFB

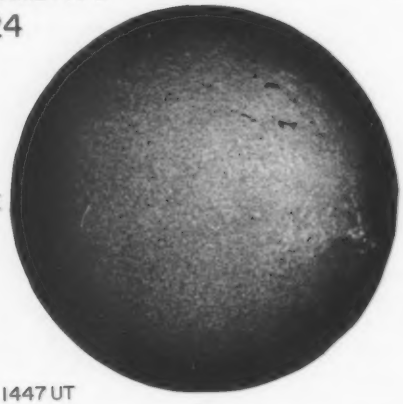
24

Np

Hα

E

W



1447 UT

Sp

BOULDER

E

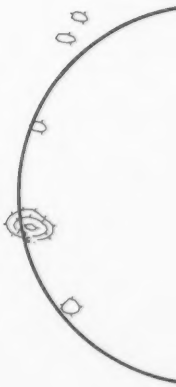
NO SPO

1730 UT

NASA GSFC

OSO-7

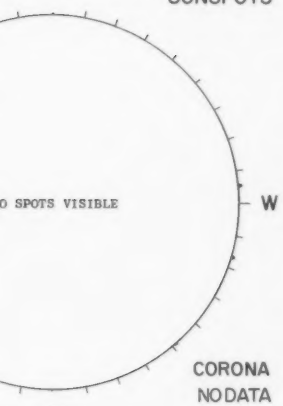
E



0334 UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

0650-0825 UT

Sp

Np

FE XV
284A

W

Sp

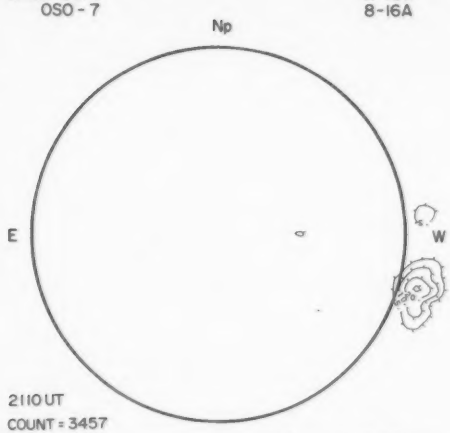
COUNT = 10103
ROLL = 1.5°
P-TH = 4.83

71
Jan 74

JANUARY 25, 1974 (P=-9.09, B_o=-5.4

NASA GSFC
OSO - 7

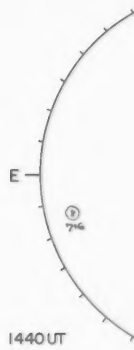
X-RAY
8-16A



2110 UT
COUNT = 3457
ROLL = 0.8°
P-TH = 4.66

Counts per 0.125 sec.

McMATH-HUL



1440 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

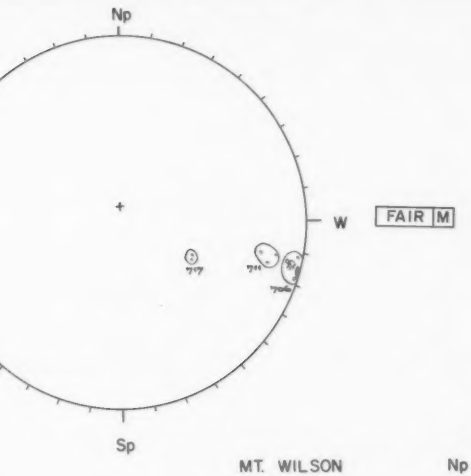
Sp

Contours in Intervals
of 200° K

6.48, L_o = 107.72)

72
Jan 74

HULBERT CALCIUM REPORT



MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E **NO DATA** W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

RAMEY AFB
25

Np

Hα

1224 UT

Sp

BOULDER

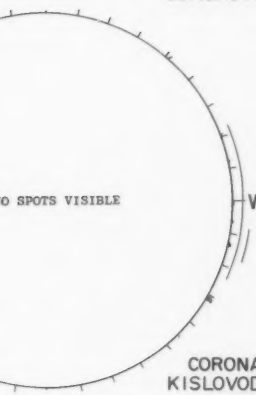
2115 UT

NASA GSFC
OSO - 7

2110 UT

Np

SUNSPOTS



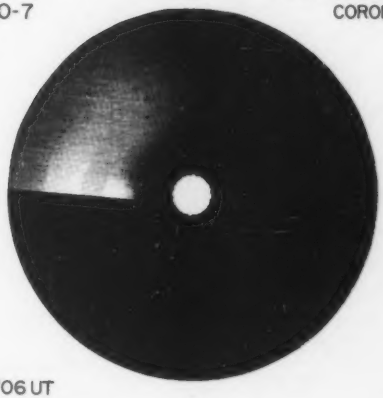
CORONA
KISLOVODSK

Sp NO DATA E. LIMB 60°-100°

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



0706 UT

Sp

Np

FE XV
284A

Sp

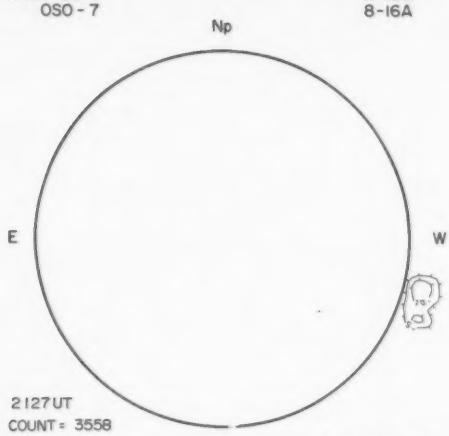
COUNT = 5527
ROLL = 0.8°
P-TH = 4.66

73
Jan 74

JANUARY 26, 1974 (P=-9.53, B_o=-5.5

NASA GSFC
OSO-7

X-RAY
8-16A



2127UT
COUNT = 3558
ROLL = 1.7°
P-TH = 4.56

Counts per 0.125 sec.

McMATH-HUL

1510UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

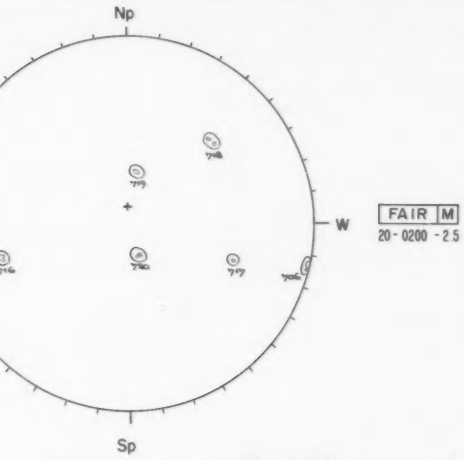
Sp

Contours in Intervals
of 200° K

5.57, $L_o = 94.55$)

74
Jan 74

HULBERT CALCIUM REPORT

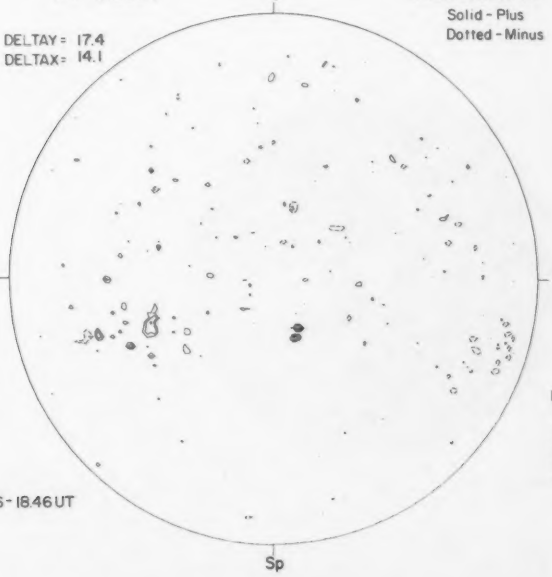


FAIR | M
20 - 0200 - 2.5

MT. WILSON MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY = 17.4
DELTAX = 14.1



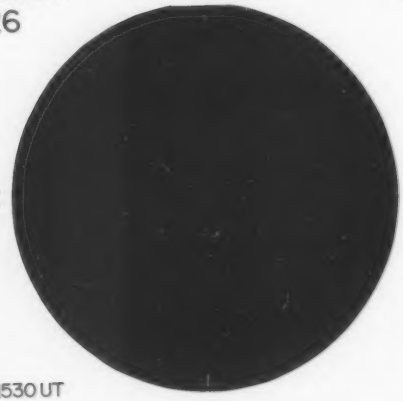
Levels
± 5
± 10
± 20
± 40
± 80

16.96 - 18.46 UT

BOULDER
26

Np

Hα



Sp

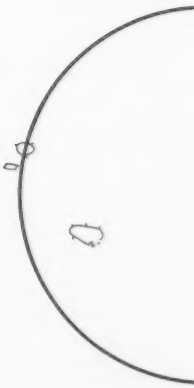
1530 UT

BOULDER

1645 UT

NASA GSFC
OSO-7

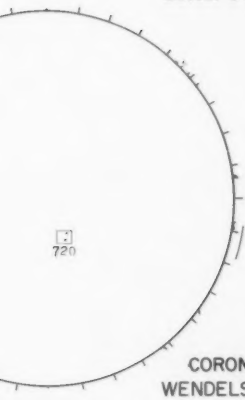
E



2127 UT

Np

SUNSPOTS



Sp

CORONA
WENDELSTEIN

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

0548-0722 UT

Sp

Np

Np

FE XV
284A

W

Sp

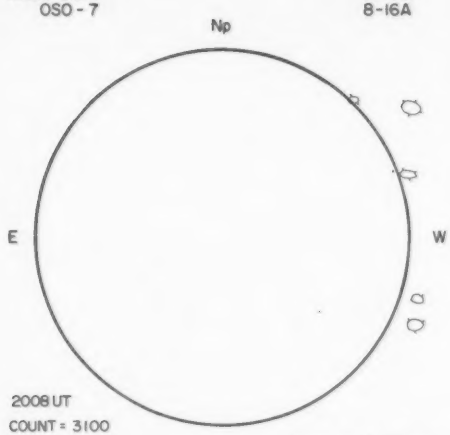
COUNT = 4525
ROLL = 1.7°
P-TH = 4.56

75
Jan 74

JANUARY 27, 1974 (P=-9.97, B_o=-5.

NASA GSFC
OSO-7

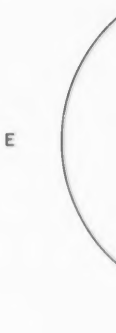
X-RAY
8-16A



2008 UT
COUNT = 3100
ROLL = 2.7°
P-TH = 4.47

Counts per 0.125 sec.

McMATH-HU



PROSPECT HILL
AFCRL

8.6 mm

Np

E

Sp

Contours in Intervals
of 200° K

-5.65, L_o = 81.38)

76
Jan 74

H-HULBERT CALCIUM REPORT

Np

NO DATA

W

Sp

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

W E NO DATA W

Levels
± 5
± 10
± 20
± 40
± 80

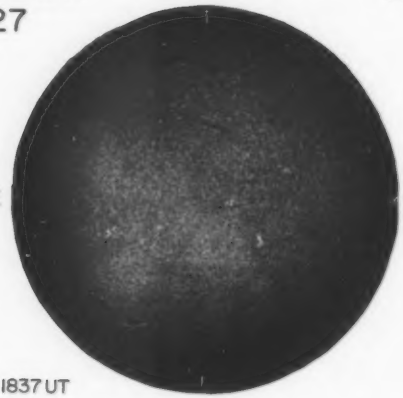
ols

Sp

BOULDER
27

Np

Hα



E

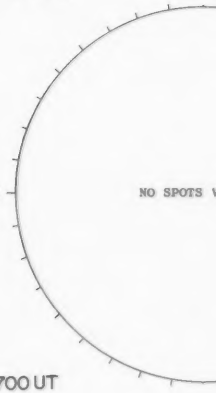
W

Sp

1837 UT

BOULDER

Np



E

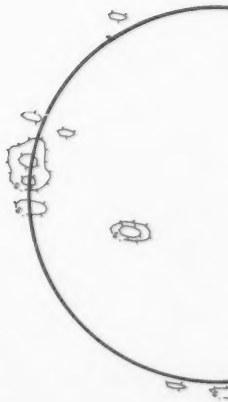
NO SPOTS

Sp

1700 UT

NASA GSFC
OSO-7

Np



E

2008 UT

Sp

Np

SUNSPOTS

TS VISIBLE

W

CORONA
NO DATA

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

W

0603-0739 UT

Sp

FE XV
284A

Np

W

Sp

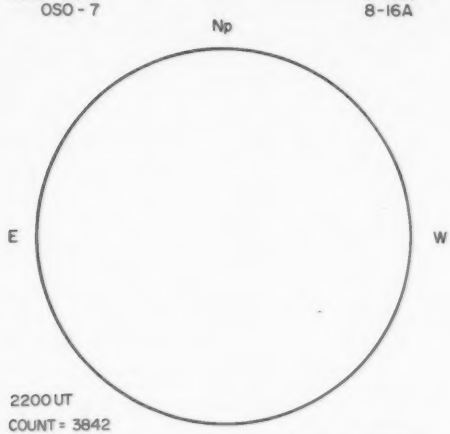
COUNT = 4223
ROLL = 2.7°
P-TH = 4.47

77
Jan 74

JANUARY 28, 1974 (P=-10.40, B_o=-5.

NASA GSFC
OSO-7

X-RAY
8-16A



2200 UT
COUNT = 3842
ROLL = 2.7°
P-TH = 4.36

Counts per 0.125 sec.

CATANIA

0935 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

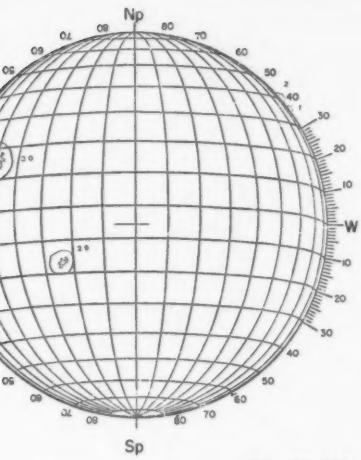
Sp

Contours in Intervals
of 200° K

-5.73, L_o = 68.22)

78
Jan 74

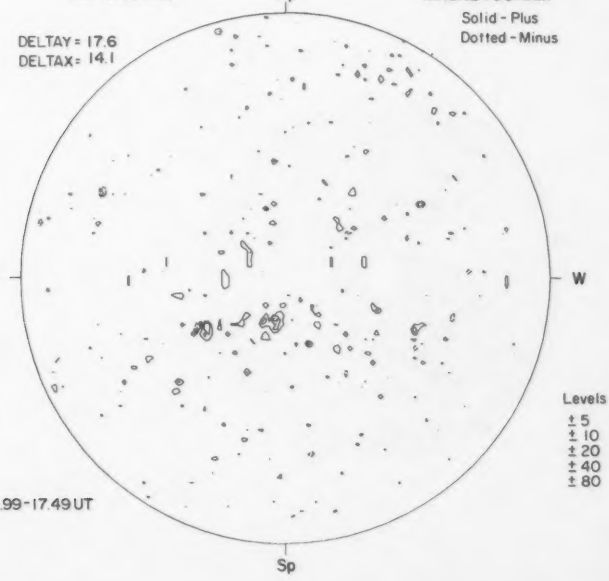
CALCIUM REPORT



FAIR GD

MT. WILSON

DELTAY = 17.6
DELTAX = 14.1



MAGNETOGRAM

Solid - Plus
Dotted - Minus

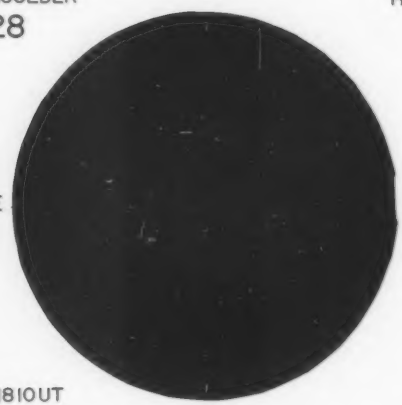
Levels
± 5
± 10
± 20
± 40
± 80

15.99-17.49 UT

BOULDER
28

Np

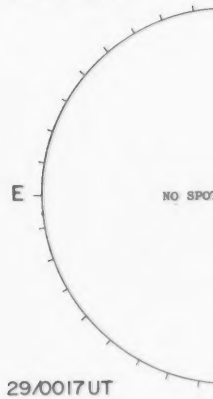
Hα



Sp

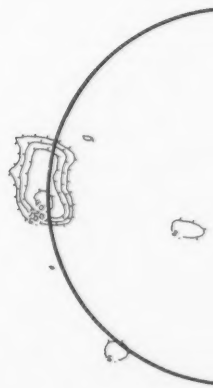
1810UT

CULGOORA



29/0017UT

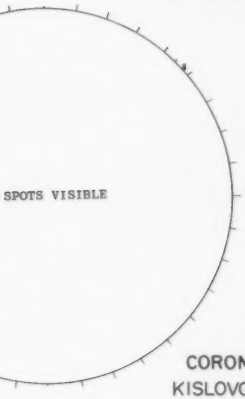
NASA GSFC
OSO-7



2200UT

Np

SUNSPOTS



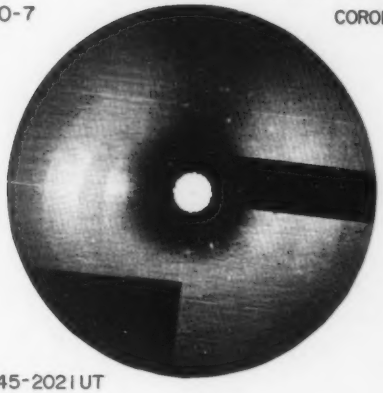
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



0445-2021 UT

Sp

Np

FE XV
284A

W

Sp

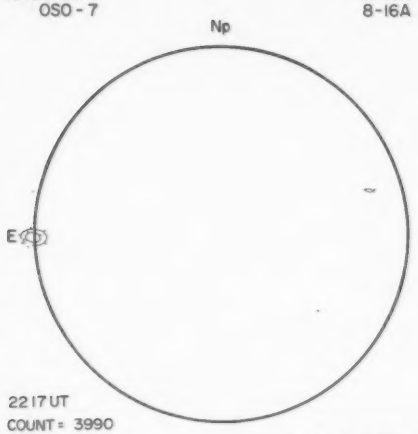
COUNT = 3284
ROLL = 2.7°
P-TH = 4.36

79
Jan 74

JANUARY 29, 1974 (P=-10.82, B_o=-5.8

NASA GSFC
OSO-7

X-RAY
8-16A



2217 UT
COUNT = 3990
ROLL = 2.7°
P-TH = 4.25

Counts per 0.125 sec.

CATANIA

0915 UT

PROSPECT HILL
AFCRL

8.6 mm

Np

E

W

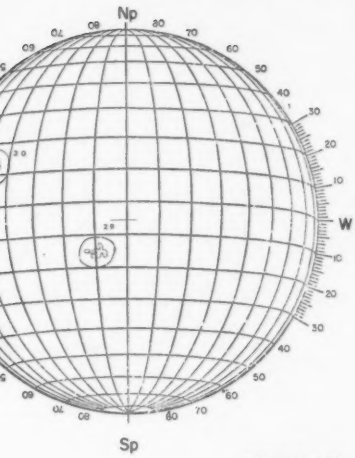
Sp

Contours in Intervals
of 200° K

5.81, $L_o = 55.05$)

80
Jan 74

CALCIUM REPORT



MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

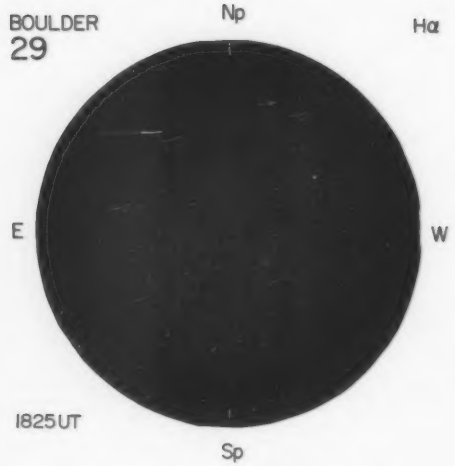
W E

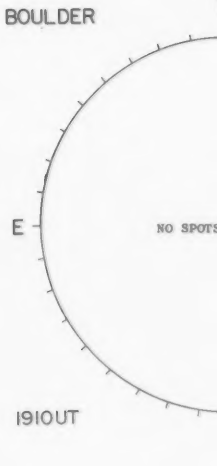
NO DATA

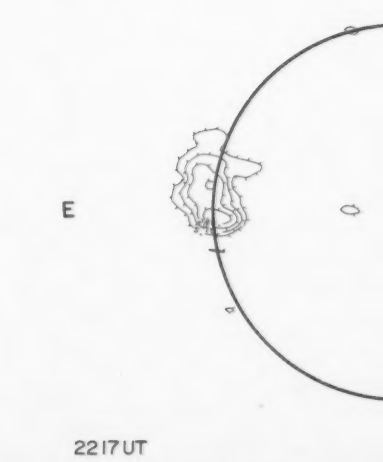
W

Levels
± 5
± 10
± 20
± 40
± 80

Sp


BOULDER
29
Np
Hα
E
W
1825UT
Sp


BOULDER
E
NO SPOTS
1910UT


NASA GSFC
OSO-7
E
2217UT

Np

SUNSPOTS

SPOTS VISIBLE

W

CORONA
NO DATA

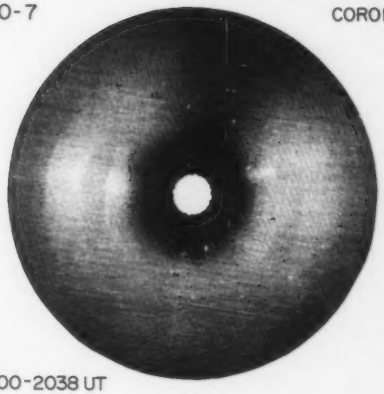
Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E



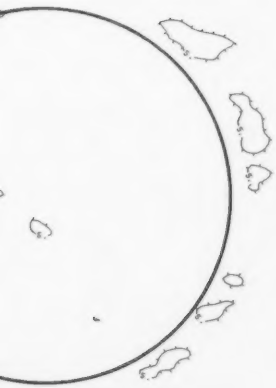
W

0500-2038 UT

Sp

Np

FE XV
284A



W

Sp

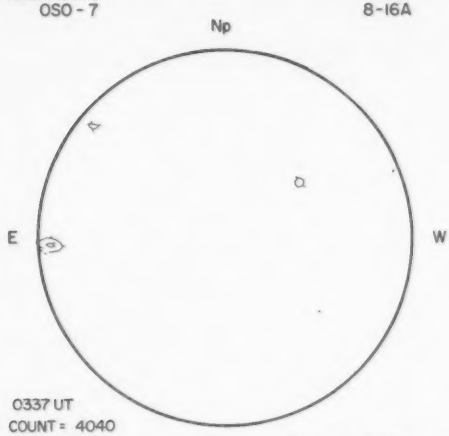
COUNT = 2697
ROLL = 2.7°
P-TH = 4.25

81
Jan 74

JANUARY 30, 1974 (P=-11.24, B_o=-5.8

NASA GSFC
OSO-7

X-RAY
8-16A



0337 UT
COUNT = 4040
ROLL = 2.6°
P-TH = 4.23

Counts per 0.125 sec.

McMATH-HUL

1430 UT

PROSPECT HILL
AFCRL

Np

8.6 mm

E

W

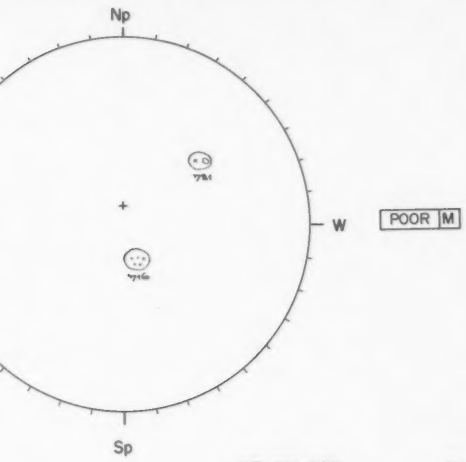
Sp

Contours in Intervals
of 200° K

5.88, L_o=41.89)

82
Jan 74

HULBERT CALCIUM REPORT

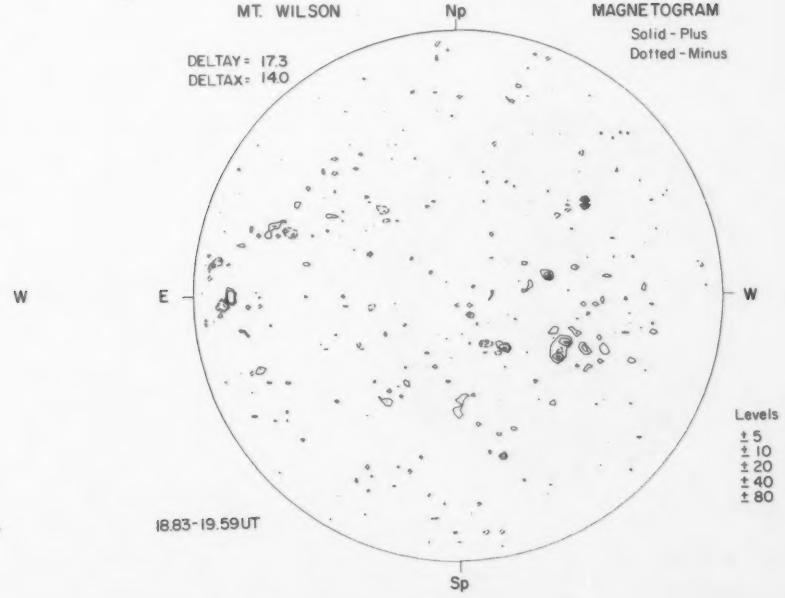


POOR M

MT. WILSON MAGNETOGRAM

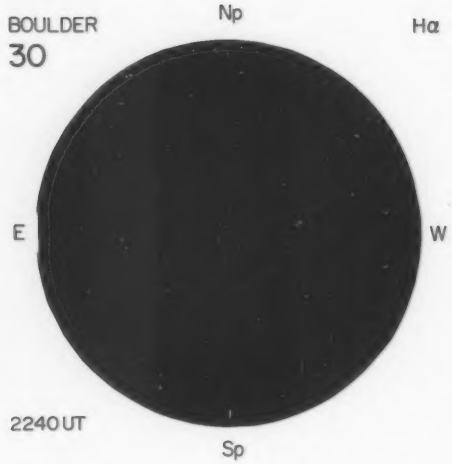
Solid - Plus
Dotted - Minus

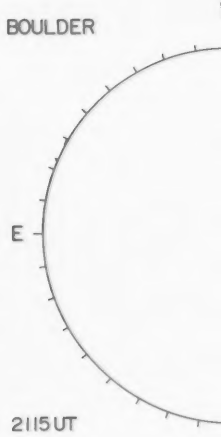
DELTAY= 17.3
DELTAX= 14.0

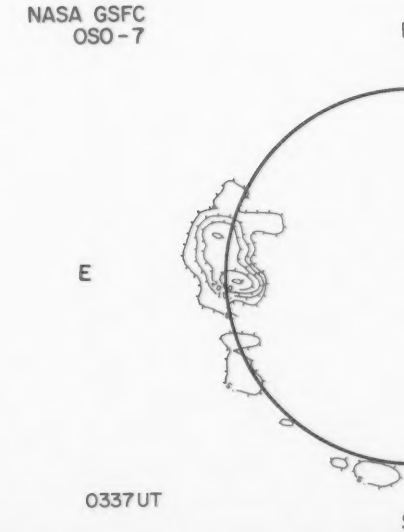


Levels
±5
±10
±20
±40
±80

18.83-19.59UT


BOULDER
30
Np
Hα
E
W
Sp
2240 UT


BOULDER
E
2115 UT


NASA GSFC
OSO-7
E
0337 UT

Np

SUNSPOTS

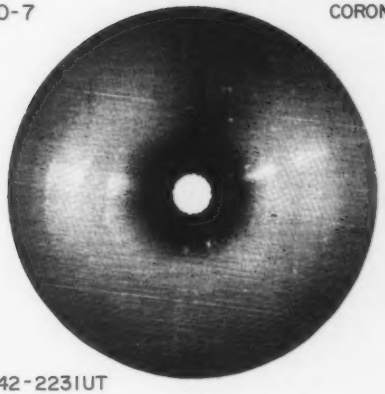
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



1742-2231UT

Sp

Np

FE XV
284A

W

Sp

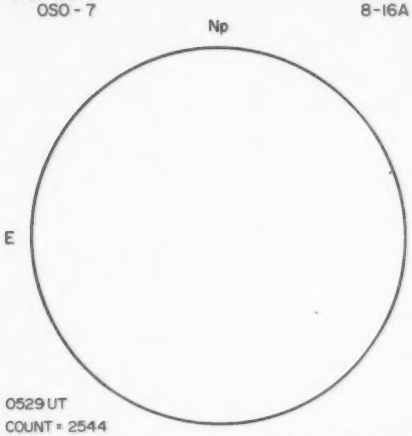
COUNT = 3358
ROLL = 2.6°
P-TH = 4.23

83
Jan 74

JANUARY 31, 1974 (P = -11.66, B_o = -5.96

NASA GSFC
OSO - 7

X-RAY
8-16A



0529 UT
COUNT = 2544
ROLL = 3.1°
P-TH = 4.12

Counts per 0.125 sec.

McMATH-HULB

1440 UT

PROSPECT HILL
AFCRL

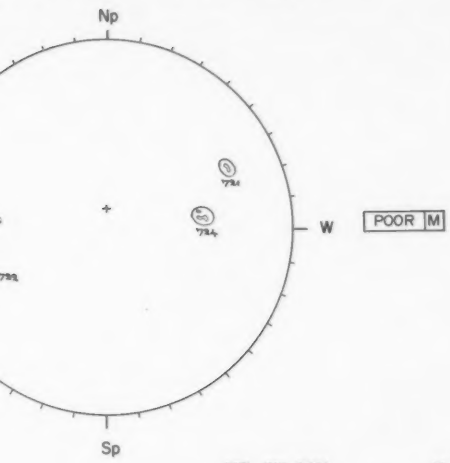
8.6 mm

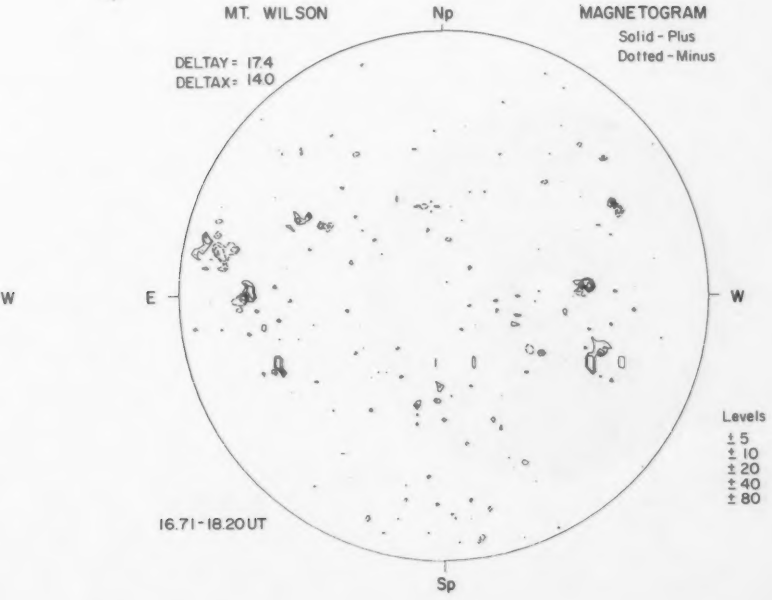
Contours in Intervals
of 200° K

96, $L_o = 28.72$)

84
Jan 74

ULBERT CALCIUM REPORT





BOULDER
31

Np

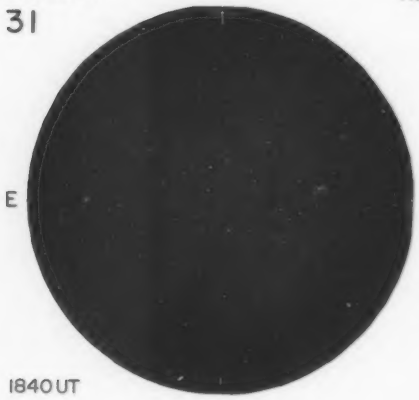
Hα

E

W

Sp

1840 UT



BOULDER

E

NO SPOT

1900 UT

NASA GSFC
OSO-7

E

0529 UT

Np

SUNSPOTS

SPOTS VISIBLE

W

CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

W

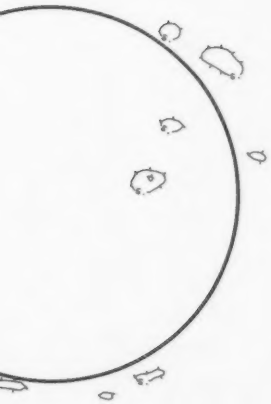
1758-2247 UT

Sp

Np

FE XV
284A

Np



W

Sp

COUNT = 2577
ROLL = 3.1°
P-TH = 4.12

85
Jan 74

REGIONS OF SOLAR ACTIVITY

JANUARY 1974

MCMATH REGION 12683 CMP DATE 1.9

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	1	12683	N14 E03	52	600	2.0									
74	1	4	12683	N13 W36	51	200	1.5									
74	1	5	12683	N13 W52	52	200	1.0									

MCMATH REGION 12674 CMP DATE 2.0

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
73	12	28	12674	S14 E58	48	400	1.5									
73	12	30	12674	S15 E33	47	400	1.5									
73	12	31	12674	S14 E20	47	300	1.5									
74	1	1	12674	S15 E05	50	500	1.5									
74	1	4	12674	S15 W35	50	300	1.0									
74	1	5	12674	S15 W50	50	300	1.0									

MCMATH REGION 12681 CMP DATE 2.5

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
73	12	31	12681	N10 E25	42	200	1.0									
74	1	1	12681	N10 E12	43	300	1.0									

MCMATH REGION 12684 CMP DATE 2.6

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	1	12684	S15 E13	42	300	2.5									
74	1	2						19310	S15 W03	41	(BP)	3		80	5	DAO
74	1	3							S15 W15					50	3	DAO
74	1	4	12684	S15 W27	42	500	2.5		S14 W27					30	4	CRO
74	1	5	12684	S16 W41	41	400	2.5									
74	1	7	12684	S16 W66	41	400	2.0									
74	1	8	12684	S16 W78	41	300	1.5									

MCMATH REGION 12675 CMP DATE 3.5

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
73	12	28	12675	S07 E75	31	200	1.5									
73	12	30	12675	S05 E58	30	200	1.0									

MCMATH REGION 12696 CMP DATE 4.1

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	8	12696	N11 W60	23	100	1.5									
74	1	9	12696	N10 W74	24	200	1.0									

MCMATH REGION 12688 CMP DATE 4.4

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	5	12688	N01 W18	18	200	1.5									

MCMATH REGION 12695 CMP DATE 5.4

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	8	12695	N47 W43	6	100	1.0									

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MCMATH REGION 12697 CMP DATE 5.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	8	12697	N10 W39	2	100	1.0								
74	1	9	12697	N10 W53	3	100	1.0								

MCMATH REGION 12682 CMP DATE 5.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
73	12	31	12682	N08 E68	-0	200	1.0								

MCMATH REGION 12691 CMP DATE 7.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	7	12691	S23 E01	334	200	1.5								
74	1	8	12691	S23 W12	335	100	1.0								

MCMATH REGION 12692 CMP DATE 8.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	7	12692	N23 E04	331	100	1.5								

MCMATH REGION 12698 CMP DATE 8.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	8	12698	S07 W03	326	100	1.5								

MCMATH REGION 12701 CMP DATE 8.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	10	12701	N24 W29	326	100	1.5								
74	1	11	12701	N24 W41	324	100	1.0								

MCMATH REGION 12699 CMP DATE 9.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	8	12699	S13 E08	315	100	1.5								
74	1	9	12699	S14 W07	317	200	1.5								

MCMATH REGION 12686 CMP DATE 9.7 RETURN OF REGION 12651 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	4	12686	N08 E71	305	400	3.0								
74	1	5	12686	N08 E56	305	400	2.0								
74	1	7	12686	N08 E28	307	500	3.0		N07 E25					30	4 BXX
74	1	8	12686	N08 E15	308	800	3.0								
74	1	9	12686	N08 E01	309	1000	2.5		N06 W02					60	10 DSO
74	1	10	12686	N08 W13	310	1400	2.5		N07 W13					20	4 DSO
74	1	11	12686	N08 W27	310	1300	3.0								
74	1	12	12686	N08 W42	312	1400	3.5	19311	N07 W46	312	(BP)	4		60	13 CAO
74	1	13	12686	N07 W55	312	1400	3.0	19311	N07 W57	313	(BP)	4		60	4 CSO
74	1	14	12686	N07 W69	311	800	2.5	19311	N07 W73	315	(BP	3			
74	1	15	12686	N07 W83	314	800	2.0		N07 W79					20	1 HSX

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MCMATH REGION 12689 CMP DATE 11.6

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	5	12689	N06 E80	281	300	1.0									
74	1	7	12689	N06 E51	284	200	1.0									
74	1	8	12689	N06 E39	284	100	1.0									

MCMATH REGION 12690 CMP DATE 12.0

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	5	12690	S17 E85	276	400	1.5									
74	1	7	12690	S17 E56	279	800	2.5									
74	1	8	12690	S17 E46	277	800	2.0									
74	1	9	12690	S19 E32	278	800	2.0									
74	1	10	12690	S18 E18	279	800	2.0									
74	1	11	12690	S18 E04	279	800	2.0									
74	1	12	12690	S18 W08	278	500	2.0									
74	1	13	12690	S18 W21	278	700	2.0									
74	1	14	12690	S18 W35	277	400	1.0									
74	1	15	12690	S19 W48	279	400	1.0									
74	1	16	12690	S19 W60	277	300	1.0									

MCMATH REGION 12693 CMP DATE 13.3

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	7	12693	N09 E84	251	300	1.0									
74	1	8	12693	N09 E66	257	500	1.5		N04 E66					100	1	HSX
74	1	9	12693	N08 E50	260	400	2.5		N03 E53					50	1	HSX
74	1	10	12693	N08 E36	261	400	2.0		N02 E38					50	1	HSX
74	1	11	12693	N08 E22	261	300	1.5		N02 E23					50	1	HSX
74	1	12	12693	N08 E08	262	100	1.0									

MCMATH REGION 12700 CMP DATE 14.1

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	9	12700	N12 E60	250	200	2.5		N11 E58					0	1	AXX
74	1	10	12700	N12 E48	249	200	1.5		N11 E45					0	2	BXX
74	1	11	12700	N12 E33	250	200	1.5									
74	1	12	12700	N12 E20	250	400	1.5									
74	1	13	12700	N12 E06	251	600	1.5		N02 W02					40	1	HSX
74	1	14	12700	N10 W12	254	700	3.0	19318	N09 W16	258	(BF)	3		40	1	HSX
74	1	15	12700	N08 W27	258	900	3.0	19318	N09 W28	258	(BP)	3		20	1	HSX
74	1								N08 W29					20	2	CRO
74	1	16	12700	N08 W41	258	900	3.0		N09 W46					20	1	HSX
74	1	17						19318	N10 W62	262	(AP)	2		0	1	AXX
74	1	19	12700	N08 W83	260	800	1.5									

MCMATH REGION 12694 CMP DATE 14.5 RETURN OF REGION 12657 ROTATION 3

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	7	12694	S09 E87	248	200	1.0									
74	1	8	12694	S10 E80	243	1500	2.5									
74	1	9	12694	S10 E64	246	2200	3.0		S11 E62					130	1	HSX
74	1	10	12694	S10 E51	246	2500	3.0		S10 E48					40	2	CSI
74	1	11	12694	S11 E37	246	2100	3.0									
74	1	12	12694	S10 E24	246	2000	3.0	19312	S10 E22	244	(BP)	5		110	8	CSI
74	1	13	12694	S11 E11	246	2000	3.0	19312	S11 E12	244	(BP)	5		130	13	CSO
74	1	14	12694	S11 W02	244	1800	3.0	19312	S11 W03	245	(BP)	5				
74	1	15	12694	S12 W15	246	2000	3.0	19312	S11 W16	246	(BP)	4		110	6	CSO
74	1	16	12694	S13 W28	245	2000	3.5		S11 W22					10	3	BXO
74	1		12694						S12 W29					50	4	CAO
74	1	17						19312	S12 W45	245	(BP)	4		50	4	CAO
74	1	18						19312	S11 W55	245	(AP)	3		20	2	AXX
74	1							19323	S11 W48	238	(BP)	3		10	2	BXO
74	1	19	12694	S13 W68	245	1500	3.0	19312	S11 W68	245	AP			10	2	BXO
74	1							19324	S15 W67	244						
74	1							19323	S11 W63	240	AP					

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MCMATH REGION 12707B CMP DATE 16.1

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	16	12707B	N17 W07	224	200	2.5		N17 W08					10	2	BXO
74	1	19	12707B	N17 W47	224	300	2.0									

MCMATH REGION 12705 CMP DATE 16.4

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	12	12705	N59 E49	221	100	1.0									

MCMATH REGION 12702 CMP DATE 16.9 RETURN OF REGION 12668 & 12669 ROTATION 2

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	10	12702	S14 E85	212	700	2.0							30	1	HSX
74	1	11	12702	S14 E71	212	700	1.5									
74	1	12	12702	S15 E58	212	1000	2.5	19313	S13 E49	217	(AP)	4		50	3	HAX
74	1	13	12702	S15 E44	213	1000	2.5	19313	S14 E40	216	(BP)	4		50	6	CAO
74	1	14	12702	S15 E28	214	900	2.0	19313	S15 E26	216	(BP)	3				
74	1	15	12702	S16 E17	214	1000	2.5	19313	S15 E13	217	(AP)	5		30	2	HSX
74	1	16	12702	S16 E04	213	800	2.5		S16 W01					40	5	CSO
74	1	17						19313	S16 W16	216	(AP)	3		20	1	HSX
74	1	18						19313	S16 W26	216	(AP)	4		10	1	HHX
74	1	19	12702	S16 W38	215	800	2.0	19313	S16 W39	216	AP			20	1	AXX
74	1	20	12702						S15 W54					0	1	AXX

MCMATH REGION 12714 CMP DATE 17.2

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	23	12714	S16 W87	210	900	3.0									
74	1	24	12714	S16 W90	203	400	2.0									

MCMATH REGION 12707A CMP DATE 17.5

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	13	12707A	S08 E56	201	300	2.5	19316	S09 E54	202	(AP)	1				

MCMATH REGION 12704 CMP DATE 17.5 RETURN OF REGION 12662 ROTATION 3

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	12	12704	N11 E70	200	200	1.5									
74	1	13	12704	N11 E55	202	300	2.0									
74	1	14	12704	N10 E40	202	200	2.0									
74	1	15	12704	N10 E25	206	200	1.5									
74	1	16	12704	N09 E11	206	200	1.5									
74	1	18	12704						N06 W24					0	1	AXX
74	1	19	12704	N08 W30	207	300	2.0									

MCMATH REGION 12708 CMP DATE 18.4

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	18	12708						N04 W05					0	1	AXX
74	1	19	12708	N06 W18	195	300	2.5		N05 W20					20	4	BXO
74	1	20	12708						N06 W33					50	5	DSI
74	1	21						19325	N06 W46	196	BP					
74	1	22						19325	N07 W60	197	BP			80	4	DSI
74	1	23	12708	N07 W74	197	1300	3.5	19325	N08 W75	196	AP					
74	1	24	12708	N06 W85	198	900	3.0									

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MCMATH REGION 12703 CMP DATE 18.5 RETURN OF REGION 12664 ROTATION 2

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA AREA	CNT	CLASS
74	1	11	12703	S18 E86	197	300	1.0								
74	1	12	12703	S18 E79	191	700	2.0	19314	S15 E69	197	(AF)	3			
74	1							19315	S18 E72	194	(AP)	4	60	4	CSO
74	1	13	12703	S18 E65	192	1200	2.5	19314	S16 E59	197	(AF)	4	80	4	CAO
74	1							19315	S18 E62	194	(AP)	4			
74	1	14	12703	S19 E50	192	1000	2.5	19314	S17 E42	200	(BF)	2			
74	1							19315	S18 E47	195	(AP)	5			
74	1	15	12703	S17 E37	194	1500	3.0	19314	S16 E32	198	(BF)	3	100	3	CSO
74	1							19315	S17 E37	193	(AP)	5			
74	1	16	12703	S17 E24	193	1700	2.5		S17 E20				80	2	CSO
74	1	17						19314	S17 E01	199	BF)	2			
74	1							19315	S18 E08	192	(AP)	4	80	3	CSO
74	1							19320	S06 E07	193	(B)	1			
74	1	18						19314	S16 W06	196	(AF)	2	80	9	HSX
74	1							19315	S18 W03	193	(AP)	4			
74	1	19	12703	S17 W17	194	1400	2.5	19314	S16 W18	195	AF		100	9	CSI
74	1							19315	S18 W16	193	AP				
74	1	20							S16 W30				60	3	HSX
74	1	21						19314	S15 W46	196	AF				
74	1							19315	S18 W41	191	(AP)	4			
74	1	22						19315	S18 W54	191	AP		10	1	AXX
74	1							19326	S17 W47	184			30	2	HSX
74	1	23	12703	S17 W69	192	1000	2.5	19326	S17 W65	186	B				
74	1	24	12703	S18 W80	193	700	2.0								

MCMATH REGION 12709 CMP DATE 18.5

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA AREA	CNT	CLASS
74	1	19	12709	S05 W16	193	200	2.0								
74	1	23	12709	S05 W72	195	100	1.0								

MCMATH REGION 12706 CMP DATE 19.8

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA AREA	CNT	CLASS
74	1	13	12706	S14 E80	177	1200	2.5	19317	S13 E82	174	AP				
74	1	14	12706	S15 E65	177	1500	3.0	19317	S13 E70	172	(BP)	3			
74	1	14						19319	S16 E61	181	(A)	2			
74	1	15	12706	S14 E55	176	1300	3.5	19319	S16 E50	180	(A)	2	0	1	AXX
74	1							19317	S13 E58	172	(BP)	4	50	2	DRO
74	1	16	12706	S14 E43	174	1800	3.0		S14 E42				80	6	DAI
74	1	17						19319	S18 E21	179	(A)	1	60	5	CSO
74	1							19317	S11 E24	176	(AP)	3			
74	1							19321	S15 E32	168	(BP)	3	80	4	DAO
74	1	18						19319	S19 E10	180	(A)	1			
74	1							19317	S11 E13	177	(AP)	3			
74	1							19321	S16 E19	171	(BP)	2	30	8	CSI
74	1	19	12706	S15 E01	176	1700	3.0	19317	S11 E00	177	AP				
74	1							19321	S16 E04	173	BP		30	11	CRI
74	1	20	12706						S15 W10				20	6	CRI
74	1	23	12706	S15 W53	176	2200	3.0								
74	1	24	12706	S15 W63	176	2000	2.5								
74	1	25	12706	S15 W76	175	1700	2.0								
74	1	26	12706	S15 W89	174	600	1.0								

MCMATH REGION 12710 CMP DATE 19.8

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA AREA	CNT	CLASS
74	1	19	12710	N15 E01	176	300	2.5		N14 W01				20	4	BXO
74	1	23	12710	N15 W54	177	100	1.0								
74	1	24	12710	N15 W65	178	100	1.0								

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MCMATH REGION 12711 CMP DATE 21.5 RETURN OF REGION 12666* ROTATION 3

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	17						19322	S16 E44	156	(AP)	1			
74	1	19	12711	S13 E23	154	400	1.0								
74	1	23	12711	S14 W30	153	300	1.0								
74	1	24	12711	S14 W41	154	300	1.5								
74	1	25	12711	S14 W54	153	200	1.0								

MCMATH REGION 12712 CMP DATE 23.8

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	19	12712	N09 E53	124	200	1.5								

MCMATH REGION 12713 CMP DATE 23.8

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	19	12713	S12 E54	123	200	1.0								

MCMATH REGION 12717 CMP DATE 23.8

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	25	12717	S15 W24	123	200	1.0								
74	1	26	12717	S16 W36	121	100	1.0								

MCMATH REGION 12718 CMP DATE 24.4

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	26	12718	N22 W30	115	200	1.0								

MCMATH REGION 12720 CMP DATE 26.4

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	26	12720	S16 W03	88	200	2.5		S17 W06					10	2 BXO

MCMATH REGION 12719 CMP DATE 26.5

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	26	12719	N11 W02	87	100	1.5								

MCMATH REGION 12715 CMP DATE 28.0

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	24	12715	N03 E45	68	100	1.0								

MCMATH REGION 12721 CMP DATE 28.6

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	1	30	12721	N15 W27	61	200	1.5								
74	1	31	12721	N15 W42	61	200	1.5								
74	2	2	12721	N15 W70		600	2.0								

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

REGIONS OF SOLAR ACTIVITY

JANUARY 1974

MCMATH REGION 12726 CMP DATE 29.0

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	2	2	12726	S15 W62		100	1.5									

MCMATH REGION 12724 CMP DATE 29.3

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	30	1274					19327	S02 W21	51	(BP)	3		20	4	BXI
74	1	31	12724	S02 W31	50	200	1.0									
74	2	2	12724	S02 W58		100	1.0									

MCMATH REGION 12716 CMP DATE 30.3 RETURN OF REGION 12684* ROTATION 2

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	1	24	12716	S13 E75	38	200	1.0									
74	1	25	12716	S14 E60	39	200	1.5									
74	1	26	12716	S14 E47	38	200	2.0									
74	1	30	12716	S15 W04	38	200	1.0									

MCMATH REGION 12727 CMP DATE 30.7

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	2	2	12727	S62 W38		100	1.0									

MCMATH REGION 12729 CMP DATE 31.9

				CALCIUM	PLAGE	DATA			SUNSPOT	DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	2	2	12729	S65 W20		100	1.0									

Note: Region 12706 is primarily new plage that has formed in the location of old plages 12665 & 12666 of the preceding rotation.
No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on January 2, 3, 6, 17, 18, 20, 21, 22, 27, 28 and 29, 1974.
No sunspot observations were made at Mt. Wilson Observatory on January 3-11, 16 and 20, 1974.

Errata: The following changes should be made in the June 1972 Mt. Wilson magnetic classification of sunspots:
18859 βp Becomes a large βf.
18860 αp "Disappears" as a separate group and becomes part of 18859.
18861 βγ The γ suffix is dropped and group becomes βf.
See pp 94 & 95 of 336 Part I published in August 1972.

DAILY CALCIUM PLAGE INDEX

JANUARY 1974

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
74	1	1	3.2	74	1	11	10.9	74	1	21	*
74	1	2	*	74	1	12	12.1	74	1	22	*
74	1	3	*	74	1	13	14.2	74	1	23	6.0
74	1	4	1.9	74	1	14	13.3	74	1	24	2.9
74	1	5	1.8	74	1	15	16.8	74	1	25	1.1
74	1	6	*	74	1	16	18.2	74	1	26	1.1
74	1	7	3.2	74	1	17	*	74	1	27	*
74	1	8	4.9	74	1	18	*	74	1	28	*
74	1	9	7.7	74	1	19	14.3	74	1	29	*
74	1	10	10.3	74	1	20	*	74	1	30	0.7
								74	1	31	1.0

* NO OBSERVATIONS

SOLAR X-RAYS MEASURE
SOLRAD 9 – EXP

JANUARY 19

NAVAL RESEARCH LABORATORY 1 - 8A HOURLY AVERAGES (10^{-3} ergs/cm^2/sec)

DAY	HOUR												
	1	2	3	4	5	6	7	8	9	10	11	12	
1	0.09	0.12	0.12	0.17	0.12	0.11	0.10	0.10	0.11	0.11	0.10	0.13	0.
2	0.16	0.12	0.16	0.14	0.15	0.09	0.10	0.10	0.34	0.14	0.13	0.17	0.
3	0.11	0.11	0.11	0.14	0.10	0.09	0.09	0.11	0.11	0.10	0.10	0.09	0.
4	0.10	0.10	0.10	0.12	0.09	0.12	0.10	0.10	0.10	0.13	0.14	0.09	0.
5	0.11	0.13	0.12	0.11	0.10	0.11	0.10	0.10	0.10	0.11	0.09	0.11	0.
6	0.10	0.12	0.10	0.11	0.11	0.10	0.10	0.10	0.11	0.10	0.11	0.11	0.
7	0.14	0.15	0.12	0.11	0.12	0.13	0.12	0.12	0.11	0.11	0.12	0.13	0.
8	0.11	0.15	0.13	0.13	0.12	0.12	0.15	0.12	0.14	0.11	0.11	0.13	0.
9	0.11	0.12	0.13	0.12	0.14	0.09	0.12	0.13	0.14	0.16	0.12	0.12	0.
10	0.12	0.18	0.12	0.24	0.11	0.12	0.13	0.12	0.12	0.46	0.20	0.16	0.
11	0.13	0.13	0.20	0.18	0.15	0.12	0.13	0.11	0.30	0.30	0.29	0.20	0.
12	0.20	0.17	0.18	0.19	0.15	0.14	0.14	0.16	0.19	0.16	0.22	0.14	0.
13	0.15	0.16	0.14	0.15	0.16	0.19	0.14	0.16	0.14	0.11	0.14	0.17	0.
14	0.33	0.66	0.50	4.98	1.60	0.41	0.26	0.25	0.49	1.93	0.31	0.18	0.
15	0.13	0.17	0.22	0.17	0.18	0.15	0.16	0.18	0.21	0.61	2.33	9.89	1.
16	0.18	0.17	0.19	0.19	0.16	0.19	4.44	0.56	0.28	0.20	0.17	0.25	0.
17	0.16	0.15	0.14	0.12	0.14	0.12	0.13	0.14	0.22	0.38	0.14	0.15	0.
18	0.13	0.13	0.19	0.17	0.17	0.16	0.12	0.16	0.16	0.14	0.14	0.14	0.
19	0.12	0.12	0.16	0.14	0.12	0.15	0.11	0.12	0.14	0.14	0.10	0.20	0.
20	0.13	0.10	0.15	0.13	0.14	0.11	0.12	0.16	0.14	0.16	0.15	0.14	0.
21	0.15	0.14	0.12	0.10	0.13	0.13	0.13	0.13	0.10	0.15	0.15	0.14	0.
22	0.68	0.37	0.33	0.24	0.17	0.26	0.30	0.32	0.46	1.21	0.26	0.39	0.
23	0.20	0.39	0.47	0.33	0.18	0.28	0.27	0.20	0.17	0.14	0.22	0.18	0.
24	0.14	0.20	0.14	0.16	0.16	0.15	0.13	0.15	0.15	0.19	0.22	0.13	0.
25	0.15	0.13	0.15	0.18	0.15	0.13	0.22	0.12	0.10	0.16	0.11	0.12	0.
26	0.11	0.11	0.11	0.11	0.09	0.09	0.12	0.11	0.11	0.11	0.17	0.15	0.
27	0.13	0.16	0.12	0.10	0.12	0.13	0.12	0.13	0.15	0.14	0.22	0.16	0.
28	0.11	0.12	0.09	0.12	0.14	0.12	0.14	0.11	0.14	0.24	0.19	0.15	0.
29	0.14	0.10	0.14	0.09	0.13	0.17	0.12	0.17	0.13	0.12	0.12	0.17	0.
30	0.12	0.12	0.14	0.11	0.17	0.12	0.20	0.10	0.17	0.11	0.15	0.15	0.
31	0.10	0.16	0.12	0.10	0.14	0.13	0.12	0.12	0.13	0.15	0.19	0.09	0.

URED BY SATELLITE
XPLORER 37

Y 1974

13	14	15	16	17	18	19	20	21	22	23	24
0.12	0.09	0.10	0.10	0.11	0.23	0.11	0.12	0.14	0.10	0.20	0.12
0.14	0.14	0.12	0.12	0.15	0.14	0.13	0.16	0.13	0.16	0.12	0.11
0.11	0.14	0.11	0.16	0.14	0.12	0.16	0.10	0.11	0.13	0.10	0.17
0.12	0.09	0.09	0.11	0.14	0.14	0.10	0.12	0.26	0.10	0.22	0.10
0.11	0.09	0.11	0.09	0.17	0.13	0.10	0.13	0.14	0.13	0.17	0.10
0.11	0.10	0.11	0.11	0.14	0.09	0.21	0.11	0.13	0.16	0.26	0.16
0.13	0.12	0.13	0.16	0.11	0.13	0.15	0.11	0.18	0.11	0.19	0.11
0.13	0.13	0.14	0.18	0.24	0.10	0.12	0.15	0.11	0.21	0.14	0.11
0.12	0.15	0.16	0.38	0.19	0.12	0.26	0.19	1.01	0.28	0.13	0.13
0.15	0.12	0.25	0.20	0.16	0.22	0.14	0.11	0.12	0.17	0.15	0.13
0.15	0.14	0.15	0.20	0.16	0.19	0.11	0.22	0.46	0.26	0.19	0.18
0.21	0.15	0.17	0.14	0.16	0.19	0.25	0.19	0.61	0.18	0.14	0.16
0.20	0.19	0.25	0.19	0.79	0.34	0.35	0.36	0.44	0.25	0.85	0.63
0.19	0.18	0.18	0.22	0.23	0.28	0.16	0.23	0.19	0.16	0.18	0.12
1.38	0.69	1.19	0.25	0.24	0.18	0.19	0.28	0.16	0.25	0.18	0.22
0.15	0.16	0.19	0.18	0.16	0.11	0.22	0.16	0.24	0.23	0.39	0.33
0.11	0.13	0.15	0.15	0.13	0.12	0.16	0.27	0.26	0.15	0.12	0.14
0.21	0.17	0.13	0.17	0.13	0.18	0.17	0.41	0.33	0.28	0.16	0.12
0.15	0.13	0.15	0.14	0.16	0.14	0.16	0.13	0.23	0.18	0.13	0.13
0.17	0.18	0.13	0.14	0.17	0.17	0.17	0.13	0.22	0.12	0.17	0.17
0.16	0.16	0.22	0.18	0.22	0.15	0.15	0.21	2.86	0.66	0.14	3.77
0.77	0.40	0.36	0.43	0.86	0.79	0.26	0.59	0.19	0.51	0.19	0.18
0.21	0.19	0.26	0.19	0.13	0.17	0.21	0.49	0.38	0.14	0.15	0.15
0.25	0.14	0.23	0.17	0.14	0.23	0.14	0.16	0.15	0.14	0.12	0.18
0.19	0.14	0.11	0.10	0.15	0.16	0.18	0.19	0.11	0.10	0.12	0.11
0.12	0.11	0.09	0.14	0.10	0.11	0.20	0.10	0.23	0.13	0.13	0.20
0.14	0.11	0.12	0.18	0.13	0.19	0.13	0.12	0.14	0.12	0.11	0.10
0.13	0.11	0.19	0.09	0.12	0.19	0.11	0.16	0.10	0.11	0.11	0.11
0.24	0.86	0.11	0.10	0.24	0.10	0.30	0.12	0.10	0.12	0.12	0.25
0.31	0.09	0.10	0.13	0.10	0.39	0.15	0.11	0.12	0.11	0.25	0.11
0.28	0.14	0.19	0.15	0.11	0.12	0.09	0.20	0.10	0.10	0.14	0.11

SOLAR X-RAYS MEA

SOLRAD 9 -

JANU

NAVAL RESEARCH LABORATORY 8 - 20A HOURLY AVERAGES (10^{-2} ergs/cm^2

DAY	1	2	3	4	5	6	7	8	9	10	11	HO
1	0.05	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.
2	0.06	0.05	0.06	0.05	0.05	0.08	0.05	0.06	0.11	0.07	0.06	0.
3	0.06	0.05	0.06	0.08	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.
4	0.05	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.
5	0.06	0.06	0.08	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.
6	0.08	0.07	0.07	0.06	0.07	0.06	0.06	0.06	0.07	0.06	0.07	0.
7	0.11	0.14	0.11	0.12	0.12	0.13	0.12	0.14	0.10	0.11	0.12	0.
8	0.15	0.16	0.15	0.15	0.16	0.14	0.15	0.14	0.13	0.12	0.13	0.
9	0.14	0.15	0.16	0.16	0.14	0.14	0.16	0.18	0.17	0.18	0.18	0.
10	0.19	0.17	0.18	0.30	0.19	0.18	0.17	0.19	0.19	0.46	0.30	0.
11	0.23	0.23	0.26	0.28	0.25	0.26	0.26	0.25	0.44	0.42	0.41	0.
12	0.30	0.31	0.34	0.36	0.33	0.32	0.30	0.29	0.33	0.30	0.38	0.
13	0.30	0.30	0.29	0.29	0.29	0.30	0.27	0.27	0.27	0.28	0.31	0.
14	0.58	0.69	0.65	2.77	1.49	0.70	0.48	0.45	0.58	1.08	0.54	0.
15	0.29	0.32	0.39	0.37	0.33	0.30	0.29	0.34	0.33	0.63	1.11	4.
16	0.34	0.32	0.34	0.37	0.36	0.36	1.80	0.70	0.48	0.39	0.33	0.
17	0.28	0.26	0.24	0.25	0.25	0.25	0.24	0.24	0.27	0.43	0.27	0.
18	0.23	0.22	0.28	0.24	0.24	0.21	0.21	0.20	0.19	0.20	0.19	0.
19	0.20	0.18	0.17	0.16	0.16	0.18	0.20	0.17	0.17	0.17	0.19	0.
20	0.20	0.16	0.17	0.22	0.18	0.17	0.17	0.17	0.18	0.22	0.22	0.
21	0.16	0.15	0.14	0.14	0.14	0.16	0.15	0.15	0.15	0.14	0.15	0.
22	0.66	0.48	0.40	0.31	0.26	0.32	0.36	0.43	0.47	1.12	0.39	0.
23	0.32	0.54	0.57	0.40	0.32	0.35	0.36	0.29	0.29	0.25	0.28	0.
24	0.24	0.26	0.21	0.24	0.25	0.24	0.25	0.22	0.23	0.24	0.24	0.
25	0.23	0.21	0.18	0.24	0.18	0.17	0.22	0.16	0.16	0.15	0.15	0.
26	0.08	0.08	0.10	0.08	0.07	0.08	0.08	0.09	0.07	0.07	0.09	0.
27	0.05	0.05	0.06	0.05	0.06	0.05	0.05	0.07	0.05	0.07	0.06	0.
28	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.06	0.
29	0.05	0.06	0.05	0.06	0.05	0.06	0.06	0.06	0.07	0.08	0.09	0.
30	0.05	0.05	0.05	0.05	0.08	0.06	0.05	0.05	0.05	0.06	0.05	0.
31	0.05	0.05	0.06	0.05	0.05	0.05	0.07	0.05	0.06	0.09	0.06	0.

MEASURED BY SATELLITE
9 - EXPLORER 37

JANUARY 1974

/cm^2/sec)

HOUR 12	13	14	15	16	17	18	19	20	21	22	23	24
0.05	0.05	0.06	0.06	0.05	0.07	0.07	0.06	0.05	0.06	0.06	0.05	0.05
0.08	0.06	0.05	0.05	0.06	0.09	0.06	0.06	0.06	0.06	0.05	0.06	0.06
0.06	0.06	0.06	0.06	0.07	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.06
0.06	0.05	0.06	0.05	0.06	0.06	0.07	0.06	0.06	0.07	0.05	0.06	0.05
0.05	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.09	0.08	0.09	0.08
0.08	0.07	0.08	0.08	0.10	0.11	0.08	0.10	0.11	0.12	0.12	0.22	0.13
0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.14	0.14	0.13	0.15	0.15
0.14	0.14	0.14	0.13	0.17	0.14	0.15	0.16	0.17	0.15	0.18	0.18	0.14
0.17	0.17	0.22	0.22	0.30	0.19	0.18	0.16	0.21	0.70	0.30	0.18	0.18
0.22	0.21	0.21	0.34	0.27	0.27	0.27	0.27	0.26	0.24	0.26	0.24	0.24
0.34	0.29	0.31	0.29	0.32	0.32	0.33	0.31	0.32	0.40	0.39	0.33	0.33
0.30	0.30	0.29	0.30	0.30	0.31	0.32	0.33	0.30	0.47	0.32	0.29	0.30
0.35	0.37	0.39	0.45	0.38	0.72	0.49	0.69	0.56	0.58	0.48	0.98	0.85
0.38	0.37	0.33	0.29	0.35	0.42	0.37	0.35	0.32	0.32	0.30	0.29	0.27
4.55	1.31	0.81	0.90	0.46	0.40	0.34	0.35	0.35	0.35	0.38	0.37	0.36
0.37	0.28	0.27	0.33	0.30	0.27	0.28	0.27	0.27	0.26	0.28	0.50	0.44
0.26	0.23	0.21	0.21	0.21	0.21	0.22	0.22	0.33	0.36	0.27	0.24	0.23
0.18	0.18	0.21	0.19	0.20	0.19	0.20	0.29	0.41	0.45	0.36	0.25	0.21
0.18	0.17	0.17	0.17	0.20	0.20	0.17	0.18	0.18	0.22	0.20	0.19	0.18
0.18	0.19	0.24	0.19	0.18	0.18	0.17	0.22	0.20	0.19	0.18	0.22	0.22
0.15	0.15	0.14	0.14	0.15	0.16	0.14	0.20	0.18	0.90	0.51	0.24	1.79
0.41	0.77	0.54	0.43	0.47	0.81	0.53	0.39	0.51	0.29	0.46	0.24	0.29
0.25	0.29	0.24	0.21	0.23	0.22	0.26	0.27	0.57	0.53	0.24	0.20	0.21
0.23	0.25	0.23	0.25	0.22	0.23	0.23	0.22	0.25	0.21	0.23	0.22	0.29
0.15	0.14	0.14	0.14	0.11	0.13	0.13	0.10	0.11	0.12	0.12	0.10	0.09
0.08	0.08	0.08	0.08	0.08	0.07	0.06	0.07	0.05	0.06	0.06	0.05	0.06
0.05	0.08	0.05	0.05	0.06	0.05	0.05	0.05	0.08	0.07	0.06	0.05	0.05
0.07	0.06	0.07	0.07	0.06	0.06	0.05	0.05	0.06	0.05	0.05	0.05	0.05
0.06	0.05	0.05	0.10	0.06	0.05	0.05	0.06	0.05	0.07	0.07	0.05	0.05
0.05	0.06	0.06	0.05	0.06	0.05	0.07	0.09	0.05	0.06	0.05	0.05	0.06
0.08	0.07		0.10	0.05	0.08	0.07	0.05	0.08	0.05	0.06	0.06	0.05

SOLAR X-RAYS BY SATELLITE
EXPLORER 37

JANUARY 1974

NAVAL RESEARCH LABORATORY

OUTSTANDING EVENTS

DAY	START TIME	0.5-3A FLUX XE-5	PEAK TIME	1-8A FLUX XE-4	PEAK TIME	8-20A FLUX XE-3	PEAK TIME	END TIME	COMMENTS
14	0334E	20.00	0336	84.00	0336	40.00	0337	0359	
14	0924	7.80D	0928E	45.00	0929	20.00D	0929D	0930D	
15	1054	30.00	1101	130.00	1100	53.00	1102	1137	
15	1425	0.00D	1425E	53.00	1428	20.00	1427	1428D	
16	0629	51.00	0634	180.00	0634	53.00	0637	0647	
21	2047	57.00	2053	130.00	2052	53.00	2055	2100	
21	2320E	22.00	2321	76.00	2322	25.00	2325	2343	

SUDDEN IONOSPHERIC DISTURBANCES

JANUARY 1974

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
01	0909U	0953	0917	1-	1			1					*	
01	1352U	1538	1404	1-	1			1					*	
08	1221	1234	1224	1-	1			1					1220E	12694
11	1321	1353	1320	1-	1			1					1315	12694
12	1010	1029	1012	1-	1			1					1015E	12702
12	1030	1055	1035	2	3	2		4	2		2		1028	12703
14	0331	0400	0338	1-	3				2				0333	12706
15	0755	0910	0759U	1-	1			1					0758E	12686
15	1053	1210	1101	1-	3			1			1		1050	12686
15	1423	1452U	1425	1-	1			1			1		1422E	12686
19	1920	1923	1931	1-	1							1	*	
21	2055	2145	2102	1	5				1		6		2049	12708
21	2315	0026	2323	1-	1				1				2307E	12704
22	0840	0915	0845	1-	3			1	1				0840	12708
22	1741	1800	1746	1-	3						2		1745E	12708
22	1917	1935	1920	1-	3						3		1918	12708
22	2116	2120	2117	1-	1							1	2117E	12708
26	1807	1900	1820	1-	3						2		*	
26	2252	2330	2300	1-	3						2		*	
29	0851	0859	0854	1-	1			1					*	
31	2133	2136	2134	1-	1							1	2133	12723

STATIONS REPORTING FOR JANUARY 1974

AAVSO (A1, A17, A32) (SEA) (A1, A19, A21, A26, A30, A31, A37, A38) (SES) (A31, A38)(SWF)
BOULDER (BO) (SCNA, SEA)
DARMSTADT (DA) (SWF)
HAWAII (HA) (SFD)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
KUHLUNGSBORN (KU) (SWF, SEA, SPA)
KULA (KL) (SPA)
MANILA (MA) (SCNA, SPA)
MC MATH (MC) (SWF, SCNA)
PANSKA VES (PU) (SWF, SEA, SES)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SPA, SES)
SOFIA (SF) (SES)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SWF, SPA, LF-SPA)
TORINO (TN) (SPA)
TORTOSA (TS) (SEA)
UPICE (UI) (SEA)
WHITE SANDS (WS) (SWF)

St. Cloud, Minnesota (SC) is a new private observer reporting for the first time.

PERIODS OF NO OBSERVATIONS:

DATE	TIMES (UT) and STATION
01-02	0000-2200 SC (37 kHz)
01-03	0000-1731 WS
01-14	0000-2400 A32
01	0000-0010 TM, 0555-1452 TM, 1144-1352 UM (16 kHz)
04	0000-0108 TM, 1400-1626 UM (17 kHz), 1606-1648 TM, 1746-1758 TM
05-14	0000-2400 A37
08	2029-2038 TM
09	1528-1840 WS, 2015-2245 UM (13 kHz)
10	1630-1930 WS
11-13	2200-2400 A21 (22 kHz)
11	1205-1407 UM (17 kHz), 1525-1615 MC
14-16	1915-2000 A38
14	0043-0830 UM (13 kHz)
15	2030-2307 UM (13 kHz)
16-31	0000-2400 WS
16	0039-0046 MA, 0102-0107 MA, 0228-2400 UM (13 kHz), 0609-0618 MA
17	0000-2147 UM (13 kHz)
18	0012-2333 UM (13 kHz), 2002-2012 MC
19-25	0000-1840 UM (13 kHz)
20-22	0000-2400 A38
26	0013-1922 UM (13 kHz)
27	0000-2400 UM (13 kHz)
28	0000-1800 UM (13 kHz), 0853-1413 BO
29	0448-1310 TM

SID's BY McMATH

JANUARY 197

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
REGION																
86															3	
94								1			1					
02												1				
03												1				
04																
06														1		
08																
23																
X-RAY																
UNKNOWN																
NO FP	2															

TH REGION

1974

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
					1										
					1	4									
															1
			1							2			1		

Jan 74 97

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1974

JAN 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
01	0000	0735	CULG													
	0801	0926	WEIS													
	1136	1502	WEIS													
	1216	2116	SGMR													
	1430	2400	BOUL							1726.8	1731.2	1	1726.8	1731.2	1	IIIGG
	1417	2347	HARV							1727	1731	2	1727	1731	2	IIIG
	2035	2400	CULG							2258	2259	1				IIIG
			BOUL							2358.4	2359.2	1				IIIG
02	0000	0735	CULG							0112.5	0114.5	1				IIIG,V
			CULG							0513						IIIB,W
	0802	1440	WEIS													
	1218	2116	SGMR													
	1416	2348	HARV													
	1430	2400	BOUL													
	2036	2400	CULG							2200.5						IIIB,W
03	0000	0736	CULG													
	0810	1447	WEIS													
	1218	2117	SGMR													
	1417	2348	HARV													
	1430	2400	BOUL													
	2036	2400	CULG													
04	0000	0736	CULG													
	0757	0815	WEIS													
	0830	1829	WEIS													
	1032	1424	WEIS													
	1218	2118	SGMR													
	1417	2348	HARV													
	1430	2400	BOUL													
	2034	2400	CULG													
05	0000	0737	CULG							0543.5	0551	1				UNCLF
	1218	2119	SGMR													
	1417	2349	HARV													
	1430	2400	BOUL													
	2017	2021	CULG													
	2112	2400	CULG													
06	0000	0736	CULG							0554.5	0555.5	1				IIIG
	1218	2120	SGMR													
	1417	2349	HARV													
	1430	2400	BOUL													
	2048	2400	CULG													
07	0000	0738	CULG													
	0825	1503	WEIS													
	1218	2121	SGMR													
	1417	2350	HARV													
	1430	2400	BOUL													
	2035	2400	CULG							2341	2342.5	2				IIIG,V
08	0000	0739	CULG													
	0755	1508	WEIS													
	1218	2122	SGMR													
	1508	2400	BOUL													
	1417	2351	HARV							1841	1842	1	1841	1842	1	IIIG
	2039	2400	CULG													
09	0000	0739	CULG													
	0729	0837	WEIS													
	0925	1519	WEIS													
	1218	1958	SGMR													
	1416	2352	HARV													
	1430	2400	BOUL													
	2039	2112	CULG													
10	0114	0739	CULG							0317.5						IIIB,W
			CULG							0449						IIIB,W
			CULG							0503	0510					IIIG,W
			CULG							0529						IIIB,W
	0734	1520	WEIS													
	1217	2125	SGMR													
	1417	2353	HARV													
	1430	2400	BOUL							1704.6	1705.0	1	1704.6	1705.0	1	III
			BOUL							1834.2	1834.8	1	1834.2	1834.8	1	III
	2040	2400	CULG							2240.5						IIIB,W
			BOUL										2241.6	2241.9	1	III
11	0000	0740	CULG							0028.5						IIIB,W
	0742	1329	WEIS							0934.3	0934.5	2				UNCLF
	1430	2400	BOUL							1518.6	1521.3	1	1518.6	1521.3	1	IIIGG
	1217	2126	SGMR										1518.6	1521.1	2	IIIG
	1323	1520	WEIS							1518.7	1519.7	1				III
	1416	2353	HARV				1519	1521	1	1518	1522	2	1519	1521	2	IIIGG
			HARV							1720	1722	3	1720	1722	3	IIIG,V
			BOUL							1720.3	1722.0	3	1720.3	1722.0	3	IIIG
			SGMR										1720.8	1721.3	1	III
			BOUL										1808.3	1812.5	1	III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1974

JAN. 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
11			BOUL							1814.5	1817.0	2	1814.5	1817.0	2	IIIG
			HARV							1815	1817	2	1815	1817	2	IIIG
			SGMR										1816.0	1816.3	1	III
			BOUL							1845.4	1848.3	2	1845.4	1848.3	2	IIIG
			HARV							1846	1848	3	1846	1848	3	IIIG,V
			SGMR										1846.0	1847.5	2	IIIG
			HARV							1951	1953	3	1951	1953	3	IIIG
			BOUL							1951.9	1952.9	2	1951.9	1952.0	2	IIIG
			BOUL							2025.4	2025.7	1	2025.4	2025.7	1	III
	2035	2400	CULG							2035 E	2036	2				IIIG,V
			HARV							2040		3	2040		3	IIIB
			BOUL							2049.2	2051.1	2	2049.2	2051.1	2	IIIG
			CULG							2049.5	2051	2				IIIGG
			HARV							2050	2051	3	2050	2051	3	IIIGG
			HARV							2108	2110	3	2108	2110	3	IIIG,V,U
			CULG				2108.5	2109.5	1	2108	2110.5	2	2108	2110	1	IIIG,V,U
			BOUL							2108.5	2110.0	3	2108.5	2110.0	3	IIIG
			CULG							2111						IIIB,W
			HARV							2127	2128	2	2128		1	IIIG
			CULG							2127.5	2128.5	1				IIIG,U
			CULG							2151	2154					IIIG,W
			CULG							2252.5						IIIB,W
			CULG				2319.5	2321		2319	2322					IIIG,W
			CULG				2322	2327	1	2322	2327	1				I
12	0000	0740	CULG							0003	0004	1				IIIG
			CULG							0012	0014	1				IIIG
			CULG							0047		1				IIIB,U
			CULG				0150.5	0152.5	1	0150.5	0153	2				IIIGG,V,U
			CULG							0159.5	0200	1				IIIG
			CULG							0206		1				IIIB,U
			CULG							0306.5		1				IIIB
			CULG							0309.5	0310.5	1				IIIG
			CULG							0346		1				IIIG
			CULG							0351		1				IIIB
			CULG							0517		1				IIIB
			CULG							0526	0527	1				IIIG
			CULG							0541.5		1				IIIB
			CULG				0617.5	0618		0617.5	0618					IIIG,W
			CULG							0635		1				IIIB
			CULG							0650		1				IIIB
			CULG				0653.5	0655.5	1	0653.5	0658	2				IIIGGN,V
			CULG				0723.5	0724	1	0723.5	0724.5	2				IIIG,V
	0744	1520	WEIS							1015.3	1016.3					IIIG
			WEIS							1029.7	1032.2					IIIGG
			WEIS							1032.2	1032.6					IIIG
			WEIS							1032.4	1033.4					UNCLF
			WEIS							1108.6	1108.8					IIIG
	1416	2353	HARV							1443	1445	1				IIIG
			HARV							1819	1821	3	1819	1821	3	IIIG,U,V
	1217	2127	SGMR										1819.9	1820.6	2	III
			HARV							1837	1838	2				IIIG
	2040	2400	CULG				2052.5	2053	2	2052.5	2055.5	3	2053	2055	2	IIIGG,V,U
	1430	2400	BOUL							2052.9	2055.0	1	2052.9	2055.0	1	III
			HARV				2053		1	2052	2055	3	2053	2055	3	IIIGG,U,V
			SGMR										2053.0	2054.0	1	III
			CULG							2116		1				IIIB
			CULG							2153		1				IIIB
			BOUL							2153.3	2153.5	1	2153.3	2153.5	1	III
			BOUL							2159.9	2200.5	2	2159.9	2159.9	2	III
			HARV							2200		3	2200		3	IIIB
			CULG							2200	2200.5	2	2200	2200.5	1	IIIG,V
			CULG							2340.5	2341.5	1				IIIG
			HARV							2341		1				IIIG
			CULG							2353		1				IIIG
13	0000	0743	CULG							0002.5		1				IIIB
			CULG							0043.5		1				IIIB
			CULG							0117		1				IIIB
			CULG				0533.5	0534	2	0533.5	0537	3	0533.5	0535	2	IIIG,V,U
			CULG							0658						IIIB,W
			CULG							0727	0734					IIIG,W
	0745	1520	WEIS													
	1417	2353	HARV							1619	1622	3	1619	1622	3	IIIGG,V
	1430	2400	BOUL							1620.7	1621.4	2	1620.7	1621.4	2	III
	1216	2128	SGMR										1620.7	1621.4	1	III
			SGMR										1630.8	1631.2	1	III
			HARV				1632		1	1630	1632	2	1630	1631	3	IIIG
			HARV							1652	1656	3	1652	1656	3	IIIGG,U,V
			BOUL							1653.3	1655.1	2	1653.3	1655.1	2	III
			SGMR										1653.5	1655.1	3	III
			HARV							1658	1700	1				I
			CULG							2040	2400					IS,W
	2040	2400	CULG							2040	2400					IIIS,W
14			CULG							0000	0741	1				IS
	0000	0741	CULG							0000	0741	1				IIIS
	0024	08	BOUL													
			CULG							0038	0040	2				IIIG
			CULG							0112	0115	2	0112	0113	2	IIIG,V

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1974

JAN 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
14			CULG							0203	0205.5	2	0203	0205.5	1		IIIGG,V
			CULG							0214		2					IIIB,V
			CULG							0224	0225	1					IIIG
			CULG							0233		1					IIIB
			CULG							0303		2					IIIB,V
			CULG							0315	0317	2					IIIG,V
			CULG							0351	0352	1					IIIG,V
			CULG							0606.5	0607.5	2					IIIG,V,U
			CULG							0617		2					IIIB
	0744	1020	WEIS							0932.7	0932.9	1					IIIG
	1216	2129	SGMR														
	1738	2400	BOUL										1758	2315	1		CONT
	1416	2354	HARV							1757	1800	1					IIIG
			HARV							1803		3	1803		3		UNCL
	2048	2400	CULG							2048	2400						IIIS,W
			CULG							2040	2130	1					IS
			CULG							2134		1					IIIB
			CULG							2136.5		1					IIIB
			CULG							2308.5	2309	2					IIIG
15	0000	0143	CULG							0010.5							IIIB,W
	0349	0741	CULG							0349	0741						IIIN,W
			CULG							0350.5	0352	2					IIIG,V
			CULG							0534.5	0537	2					IIIGG,V,U
			CULG							0541	0543	1					IIIG,U
			CULG							0552	0741	1					IS
			CULG							0652	0653	2					IIIB,V
	1215	2130	SGMR										1425.2	1425.8	1		III
	1417	2355	HARV							1427	2354	1					IN
	1430	2400	BOUL							1437	2345	1	1437	2345	1		CONT
			HARV							1504	1506	1					IIIGG
			HARV							1643	2118	1	1643	2118	1		IIIN
	2043	2400	CULG							2043	2400	1					IIIS
			CULG							2043	2400	1					IS
			CULG				2055	2400									IN,W
16			CULG				0000	0732									IN,W
			CULG							0000	0732	1					IS
	0000	0732	CULG							0000	0732	1					IIIS
			CULG							0030	0030.5	2					IIIG,V,U
			CULG							0035	0036	2					IIIG,V,U
			CULG							0347.5		1					IIIB
			CULG							0547.5		1					IIIB
			CULG							0636	0655	1				IIH	
			CULG							0706	0707	1					UNCLF
	1430	2400	BOUL										1530	2305	1		CONT
	1417	2355	HARV							1627		1					U
			HARV							1705	2013	1	1705	2013	1		IIIN
	1215	2131	SGMR										1819.8	1821.0	1		III
	2042	2400	CULG							2043	2400	1					IIIS
17	0000	0725	CULG							0000	0725						IIIN,W
	0748	0837	WEIS														
	0853	1525	WEIS														
	1215	2133	SGMR														
	1400	2400	BOUL							1515	1805	1	1515	1805	1		CONT
	1416	2355	HARV							1701	1926	1	1701	1926	1		IIIN
			BOUL										1917	2238	1		CONT
			HARV							1931	1948	1	1934	1937	1	II	
			BOUL							1933.4	1935.7	2	1933.4	1935.7	2		III
			BOUL							1936.7	1948.5	3	1942.6	1951.7	2	II	
			HARV							2021	2022	1	2021		1		IIIG
	2043	2400	CULG							2043	2400						IIIN,W
			CULG							2058.5	2051	1					IIIG,U
18	0000	0706	CULG							0000	0448						IIIN,W
			CULG							0625.5							IIIB,W
	0748	1343	WEIS														
	1214	2134	SGMR														
	1348	1525	WEIS														
	1400	2400	BOUL														
	1417	2356	HARV														
	2044	2400	CULG														
19	0000	0706	CULG							0520	0526	1					IIIN
			CULG							0634.5	0635.5	1					IIIB,U
	0748	1249	WEIS														
	1213	2135	SGMR														
	1251	1525	WEIS														
	1400	2400	BOUL														
	1416	2357	HARV							1506		1					U
			HARV							1550	1551	1					IIIG
			HARV				1610	1611	1	1610	1612	2					IIIGG
			HARV							1647	1648	1					IIIG
			HARV				1721	1722	1	1721	1722	1					IIIG,U
	2043	2400	CULG				2208	2209	1	2208	2209	1					IIIG,U
			CULG				2230.5	2231		2230.5	2231	1					IIIG
20	0000	0742	CULG							0319	0320	1					IIIG
			CULG							0404		1					IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1974

JAN 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
20			CULG				0638	0638.5	1	0638	0638.5	1				IIIG
			CULG							0641						IIIB,N
	0740	0918	WEIS													
	0944	1525	WEIS													
	1213	2136	SGMR													
	1400	2400	BOUL													
	1417	2358	HARV													
	2043	2400	CULG							2332						IIIB,N
			CULG							2333.5		1				IIIB
21	0000	0743	CULG							0817	0817.5					IIIG,N
			CULG							0540.5						IIIB,N
			CULG							0553.5	0554	2				IIIG
			CULG							0711.5		1				IIIB
	0740	0942	WEIS													
	0948	1450	WEIS													
	1212	2138	SGMR													
	1400	2400	BOUL													
	1417	2358	HARV													
	1503	1530	WEIS													
	2044	2400	CULG							2336.5	2337	2				IIIG,U
22	0000	0744	CULG													
	0738	1531	WEIS													
	1211	2139	SGMR													
	1400	2400	BOUL													
	1416	2358	HARV													
	2044	2400	CULG													
23	0000	0030	BOUL													
	0000	0744	CULG							0406	0407					IIIG,N
	0737	1531	WEIS													
	1400	2400	BOUL							1556.8	1557.4	1	1556.8	1557.4	1	III
	1417	2358	HARV							1557	1617	1	1557	1617	1	IIIN
			BOUL							1640.3	1640.7	1	1640.3	1640.7	1	III
			BOUL							1653.5	1654.1	1	1653.5	1654.1	1	III
			BOUL										1718.8	1718.9	1	III
			BOUL							1728.0	1728.7	1	1728.0	1728.7	1	III
			HARV							1733	1735	3	1733	1735	3	IIIGG,V
			BOUL							1733.1	1735.0	3	1733.1	1735.0	3	IIIG
	1211	2140	SGMR										1733.3	1734.6	2	III
			BOUL							1813.9	1814.0	1				III
			BOUL							1816.6	1816.8	1	1816.6	1816.8	1	III
	2044	2400	CULG													
24	0000	0744	CULG													
	0000	0030	BOUL													
	0738	0822	WEIS													
	1210	2141	SGMR													
	1400	2400	BOUL													
	1415	1531	WEIS													
	1416	2359	HARV													
	2045	2400	CULG													
25	0000	0030	BOUL													
	0000	0745	CULG							0141	0141.5					IIIG,N
	0737	0806	WEIS													
	0808	1325	WEIS													
	1209	2143	SGMR													
	1329	1535	WEIS													
	1400	2400	BOUL													
	1404	2400	HARV							1950	1952	1	1950	1952	1	IIIG
	2055	2400	CULG							2104	2105	1				IIIG,U
			CULG							2109	2118	1				IIIG
			CULG							2216.5	2217.5	1				IIIG
			CULG							2221.5	2222	1				IIIG
26	0000	0030	BOUL													
	0000	0744	CULG							0838	0838.5					IIIG,N
			CULG							0244.5	0245					IIIG,N
	0735	1532	WEIS							1109.2	1109.6	2				IIIG
	1208	2144	SGMR													
	1400	2400	BOUL													
	1403	2400	HARV													
	2045	2400	CULG													
27	0000	0744	CULG													
	0000	0030	BOUL													
	0737	1542	WEIS													
	1207	2145	SGMR													
	1400	2400	BOUL													
	1402	2400	HARV													
	2045	2400	CULG													
28	0000	0745	CULG													
	0000	0030	BOUL													
	0739	0845	WEIS													
	0928	1540	WEIS													
	1400	2400	BOUL													
	1403	2301	HARV													

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1974

JAN 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
28	1206	2147	SGMR										2021.5	2023.4	1		III
	2046	2400	CULG														
29	0000	0030	BOUL														
	0000	0745	CULG							0402.5	0403.5	1					IIIG,U
	0806	1644	WEIS														
	1205	2148	SGMR														
	1400	2400	BOUL														
	1402	2301	HARV														
	2045	2400	CULG														
30	0000	0732	CULG														
	0000	0030	BOUL														
	0736	1546	WEIS														
	1204	2149	SGMR														
	1400	2400	BOUL														
	1402	2316	HARV														
	2045	2400	CULG														
31	0000	0745	CULG														
	0000	0030	BOUL														
	0739	1152	WEIS														
	1203	2151	SGMR														
	1403	2301	HARV														
	2054	2400	CULG														

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst	RS = Reverse slope burst
G = Small group (< 10) of bursts	DP = Drifting pairs
GG = Large group (> 10) of bursts	DC = Drifting Chains
C = Underlying continuum (particularly with type I)	H = Herringbone
S = Storm in the sense of intermittent but apparently connected activity	W = Weak
	P = Pulsations
N = Intermittent activity in this period	CONT = Continuum
U = U-shaped burst of Type III	UNCLF = Unclassified activity

SELECTED SOLAR EVENTS

JANUARY 1974

Culgoora

UT Date 1974 January	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions		Polarization	Intensity (1-3)		
				Central Dist. ($R_\odot$)	Position Angle (Deg.)				
2	0112	0114	43.25	1.5	300	-	2	III G, V	Not detectable at 80 or 160MHz
15	0158	0200	43.25	1.3	90	-	2	III	
			80	1.0	110	0	1		*
			160	1.0	120	0	1		
	0342	0344	43.25	1.6	250	-	3		
			80	1.0	250	0	2	III G, V	*
			160	0.9	150	0	2		
16	0035	0036	43.25	1.8	130	-	3		
			80	0.9	130	0	1	III G, V	*
			160	0.7	130	0	1		
29	0402	0404	80	0.8	300	0	1	III G, U	Not detectable at 43.25 MHz.
			160	0.8	30	0	1		

Days without Heliograph observations: 8, 9, 10, 11, 12, 13

COSMIC RAY INDICES

(Neutron Monitors)

JANUARY 1974

JAN. 1974	THULE DAILY AVERAGE COUNTS PER HOUR	CALGARY DAILY AVERAGE COUNTS PER HOUR	SULPHUR MT. DAILY AVERAGE COUNTS PER HOUR	KIEL DAILY AVERAGE COUNTS PER HOUR	DALLAS DAILY AVERAGE COUNTS PER HOUR	TOKYO DAILY AVERAGE COUNTS PER HOUR
1	4554.1	12020.6	8945.4	6302.0	6342.0	3558.5
2	4578.1	12084.2	9006.6	6355.3	6353.5(20)	3569.3
3	4605.3	12158.1	9036.9	6377.7	6361.9	3574.3
4	4613.4	12134.3	9040.4	6374.6	6359.7	3578.4
5	4601.2	12138.8	9007.5	6347.0	6351.2	3578.3
6	4605.0	12071.3	8990.3	6347.1	6337.5	3580.7
7	4591.2	12067.6(17)	9003.9	6342.9	6360.6	3578.1
8	4596.7	-- (0)	8995.5	6355.6	6327.9	3578.7
9	4597.0	12153.9(7)	9012.0	6361.7	6339.6	3571.4
10	4596.8	12242.4	9054.1	6365.5	6342.9	3576.8
11	4595.0	12208.4	9019.4	6360.6	6349.8	3576.9
12	4601.2	12171.6	9025.6	6354.6	6359.8	3584.2
13	4602.6	12144.4	9037.8	6359.2	6350.1	3586.7
14	4626.7	12204.8	9069.7	6385.0	6367.9	3588.6
15	4633.6	12139.0	9040.5	6386.2	6395.9	3581.8
16	4629.9	12093.0	9017.4	6391.2	6386.8	3573.6
17	4602.1	12087.9	8973.9	6378.0	6359.4	3572.5
18	4594.2	12067.9	8973.7	6312.9	6336.8	3558.0(21)
19	4588.8	12023.9	8971.6	6305.4	6359.8	3546.0(21)
20	4587.1	12073.3	8947.4(18)	6304.2	6345.8	3543.5
21	4608.0	12109.9	-- (0)	6326.3	6344.4	-- (0)
22	4630.5	12105.5	-- (0)	6363.2	6340.6	-- (0)
23	4634.8	12145.0	-- (0)	6366.0	6366.5	3553.8
24	4660.3	12185.4	-- (0)	6394.2	6387.8	3568.1
25	4651.2	12128.2	-- (0)	6403.0	6393.5	3559.0(22)
26	4618.6	12055.1	8990.5(2)	6352.0	6351.2	3553.4(23)
27	4582.4	12025.9	8918.0	6329.4	6321.3	3551.2
28	4581.1	12016.8	8919.7	6324.0	6331.8	3546.7
29	4580.9	12019.6	8944.0	6332.0	6341.8(21)	3546.4
30	4585.2	12092.1	8985.6	6333.5	6362.3(22)	3557.3
31	4597.2	12099.8	8983.3	6351.1	6377.5	3566.0
MEAN	4604.2	12109.0	8996.6	6353.0	6355.1	3567.7

( ) Number of hours for which data are available if less than 24.

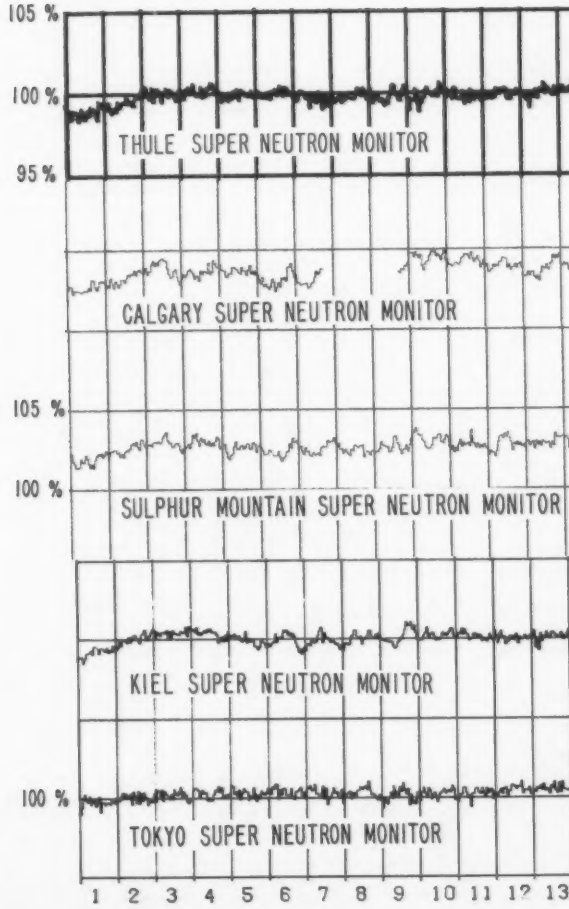
Thule, Alert, Calgary, Sulphur Mountain and Kiel Scaling Factors = 100.
Deep River Scaling Factor = 300.
Dallas " " = 120.
Tokyo " " = 128.

See *Descriptive Text* for other characteristics.

Note: Data from Deep River and Alert not received in time for publication.

COS

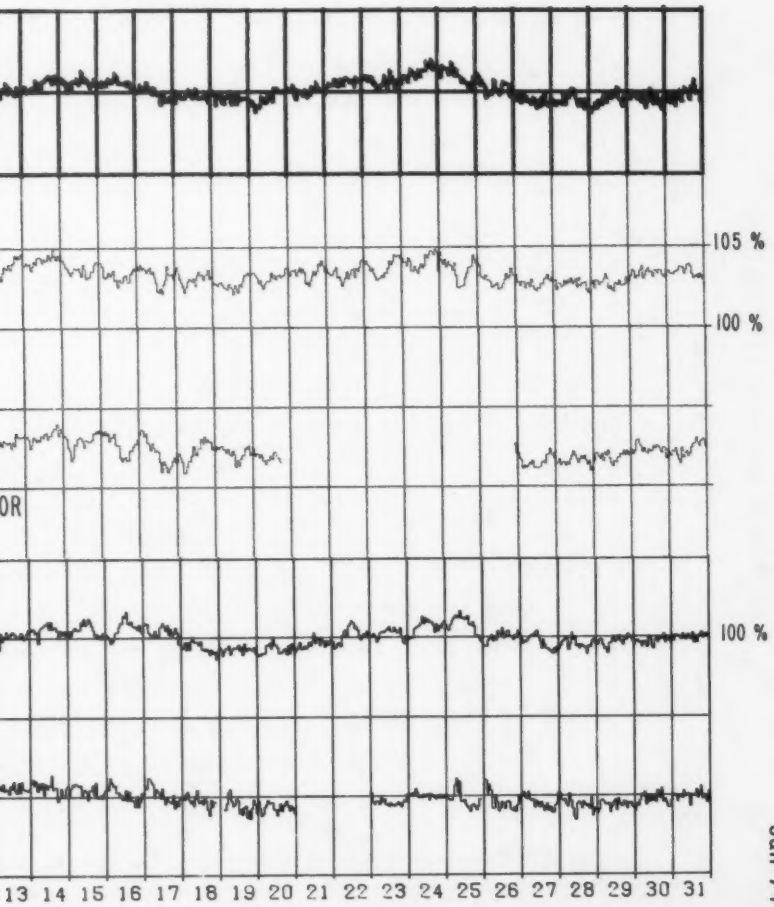
(Pressure



OSMIC RAY INDICES

re Corrected Hourly Totals)

JANUARY 1974



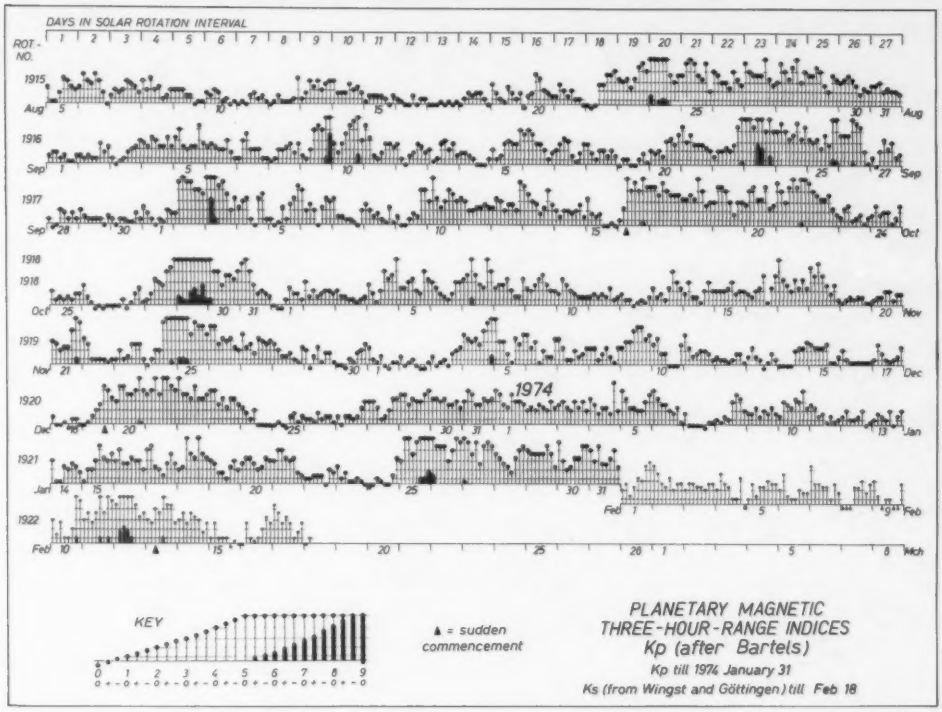
105
Jan 74

GEOMAGNETIC ACTIVITY INDICES

JANUARY 1974

Day	Three-Hour Range Indices Kp									Prel			aa			
	1	2	3	4	5	6	7	8	Sum	Ci	Cp	Ap	N	S	M	
1	4	4-	3-	2+	4-	3	3	3-	25	0.8	0.9	17	30	29	29 31	
2	2	2+	2	3-	2+	2	3	2+	19-	0.6	0.5	9	17	19	16 21	
3	3-	3	2+	2	3	2+	3	2	20+	0.6	0.6	11	18	26	19 25	
4	3+	3-	2-	2+	2+	2-	5-	2	21-	0.9	0.8	13	26	23	20 29	
5	4	3+	2+	2+	2	2	3	4-	23-	0.7	0.8	14	30	24	25 29	
6	4	3+	3-	3-	2	2-	2+	1-	19+	0.5	0.7	12	20	18	25 14	
7QQ	2-	0+	0+	0+	0+	0	1-	1-	4+	0.0	0.0	2	6	5	7 4	CC
8	1	1-	1+	1	3	4-	3+	2	16	0.7	0.5	10	21	16	7 30	
9 Q	2-	2-	2+	1+	2	2-	2+	2-	15-	0.4	0.3	7	11	23	19 16	
10	1+	3	3-	2+	3+	3	4	2+	22	0.9	0.8	14	21	32	18 34	
11 Q	3-	2+	1+	2-	1-	1+	1-	1	12-	0.2	0.3	6	11	13	16 8	C
12QQ	1+	2	1	1	1+	2	0+	1-	10-	0.2	0.2	5	11	11	9 13	KC
13 Q	1	2-	1+	1	2	0+	1+	2	11-	0.2	0.2	5	8	13	10 11	CK
14 Q	3	1-	1-	2+	2	3-	2+	2-	15+	0.5	0.4	8	16	17	15 19	
15	1-	2	2	3	4+	3+	3	4-	22	1.0	0.8	15	19	39	17 41	
16	3	4	3-	3-	3+	3	3	2	24-	0.8	0.9	15	23	23	22 24	
17	4	4+	2+	2	1+	3-	4-	3-	23	0.7	0.9	16	31	28	29 30	
18 D	2	2+	5	4-	3+	5	4-	3+	28+	1.3	1.2	24	46	44	35 54	
19 Q	3	3-	2-	2-	1	2+	3	2	17+	0.4	0.5	9	13	14	13 14	C
20	3-	3+	3+	3-	2	2+	3+	3	23-	0.7	0.8	14	27	28	29 27	
21	3	4	4	3+	3	3+	2-	1+	24-	0.7	0.9	16	22	27	30 20	
22QQ	1	1	1+	1+	1+	0+	2	2-	10	0.2	0.2	5	11	9	9 11	CK
23QQ	2+	1	2-	1-	1-	1	1-	0+	8+	0.1	0.1	4	9	7	11 5	CC
24QQ	0	0+	1	1-	0+	0+	1+	3+	7+	0.3	0.2	4	11	9	6 14	K
25 D	3	5	5	4-	5-	6-	6-	6+	39	1.6	1.6	50	82	86	54 115	
26 D	6	4+	4+	4+	3	4	5	5-	36-	1.5	1.4	38	47	56	55 48	
27 D	5+	5-	4-	5-	3-	4+	5-	4+	34+	1.4	1.3	34	61	50	53 59	
28	4-	3+	3-	2+	2-	3+	4	4+	25+	1.0	1.0	18	32	26	19 40	
29 D	4	4-	4-	4-	4-	4+	4-	2+	29	1.1	1.1	22	37	39	36 40	
30	5-	3	2	2+	3+	3+	4+	4+	27+	1.0	1.1	21	44	39	25 57	
31	4	3	4+	3-	3-	3+	4	2+	26+	0.9	1.0	19	33	28	28 34	
									MEAN	0.71	0.71	15	25.6	26.5	26.0	

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1973											1974
DAY	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
1	17	22	91	17	3	19	12	5	5	4	4	17
2	14	40	54	12	20	11	16	6	31	7	2	9
3	16	14	26	9	14	7	7	6	48	5	5	11
4	7	4	9	8	19	4	8	12	12	18	25	13
5	9	6	7	5	10	4	9	15	10	14	17	14
6	15	28	4	13	8	3	13	9	12	9	10	12
7	14	8	4	16	4	3	8	8	6	28	8	2
8	25	7	8	17	6	13	9	8	6	11	7	10
9	21	11	7	12	9	8	5	44	10	12	21	7
10	11	8	4	7	33	6	4	27	21	8	8	14
11	8	8	24	6	34	6	4	12	11	6	8	6
12	9	14	3	7	30	6	5	7	15	4	4	5
13	4	5	46	20	24	8	10	8	17	10	4	5
14	7	4	57	80	18	8	8	4	7	8	6	8
15	8	3	9	37	13	32	4	12	6	8	8	15
16	10	12	60	32	11	15	3	14	30	10	4	15
17	16	6	51	27	18	6	2	10	27	17	6	16
18	11	20	46	22	30	6	4	7	22	19	3	24
19	10	82	42	21	38	10	6	3	20	4	13	9
20	9	80	46	23	18	9	9	12	20	6	25	14
21	49	58	42	46	6	5	6	15	37	23	34	16
22	46	53	44	20	3	6	12	17	20	7	25	5
23	48	50	25	15	10	14	22	63	6	8	18	4
24	54	49	14	4	34	6	46	28	7	26	4	4
25	31	50	14	6	6	9	29	27	5	42	3	50
26	34	32	26	8	4	36	18	25	3	18	4	38
27	44	28	26	10	4	29	26	8	4	14	6	34
28	20	22	26	8	21	14	28	4	20	6	11	18
29		16	59	3	41	18	20	4	86	5	19	22
30		15	18	3	29	19	13	4	28	4	15	21
31		33		4		26	9		19		17	19
MEAN	20	25	30	17	17	12	12	14	18	12	11	15

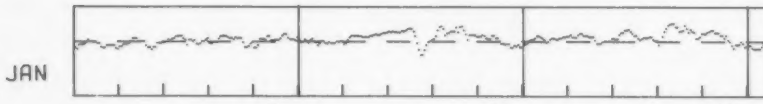
HOURLY EQUATORIAL Ds

JANUA

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT)

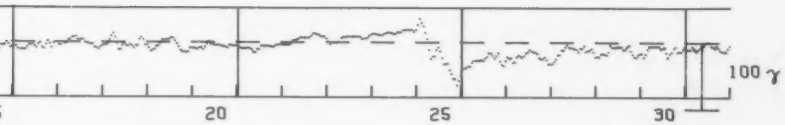
DAY	1	2	3	4	5	6	7	8	9	10	11
1	-9	-12	-6	-5	-6	-4	-2	2	-1	-2	-3
2	-9	-8	-5	-5	-4	-3	0	4	4	3	-1
3	-2	-1	2	0	3	4	7	7	6	7	4
4	-3	-5	-2	-1	-1	3	7	3	7	6	5
5	-10	-10	-6	3	2	3	1	7	8	1	1
6	2	-2	-1	2	0	-3	1	3	-1	-3	-6
7	-5	-3	2	5	3	8	8	8	6	6	5
8	14	12	14	13	12	12	12	15	14	16	13
9	3	7	16	21	22	18	8	11	12	14	14
10	7	7	5	7	4	2	2	6	7	4	3
11	-5	-6	-3	0	2	2	4	7	7	5	3
12	7	9	6	4	4	9	11	11	8	7	7
13	4	2	3	9	12	13	16	16	17	14	11
14	-3	-1	7	14	19	23	25	26	26	21	20
15	11	10	13	14	16	16	12	12	12	8	8
16	-6	-8	-11	-13	-12	-13	-12	-9	-5	-5	-4
17	-5	-6	-1	-3	-2	2	3	6	7	6	3
18	-5	-5	-3	2	6	12	6	-4	-13	-12	-6
19	-10	-14	-13	-11	-6	-6	-3	2	3	2	2
20	-9	-11	-12	-9	-10	-12	-8	-3	0	-4	-3
21	-8	-10	-11	-11	-11	-9	-11	-13	-16	-17	-12
22	-4	-5	-5	-5	-3	1	2	3	4	6	5
23	6	-4	-2	-2	-1	-2	0	5	7	7	8
24	12	11	10	9	11	10	12	13	14	13	12
25	25	34	25	23	12	3	-13	-26	-22	-22	-12
26	-41	-39	-33	-36	-36	-31	-26	-20	-28	-28	-27
27	-23	-25	-24	-31	-30	-23	-20	-22	-24	-21	-17
28	-32	-30	-26	-20	-19	-12	-12	-8	-5	-8	-10
29	-23	-22	-18	-18	-15	-20	-15	-5	-6	-8	-8
30	-18	-23	-18	-11	-7	-6	-6	-6	-7	-6	-10
31	-11	-11	-12	-7	-11	-14	-12	-9	-7	-5	-2



Dst VALUES (PROVISIONAL)

UARY 1974

12	13	14	15	16	17	18	19	20	21	22	23	24
-1	-4	-5	-9	-11	-10	-7	-7	-6	-7	-7	-11	-13
0	-1	-2	-7	-10	-9	-13	-10	-9	-3	-3	-4	-2
1	-5	2	1	-1	1	-4	-6	-4	-1	0	2	4
3	5	2	5	3	5	3	-2	-9	-9	-6	-4	-2
2	2	2	4	6	11	9	5	2	1	1	0	5
-4	0	-2	-4	-5	-2	-4	-3	-3	-1	-1	0	-1
6	5	5	6	8	9	10	9	9	11	12	12	13
19	18	13	8	-4	-14	-21	-20	-14	-6	-2	0	2
14	20	15	21	22	16	10	2	8	9	9	9	6
0	-4	-5	-6	-5	-5	-10	-11	-8	-9	-6	-10	-10
1	-2	-1	2	4	4	2	2	4	4	6	5	7
5	6	6	1	-4	-5	-5	-2	0	-1	-1	0	3
8	7	4	1	3	5	5	5	6	6	2	0	1
14	15	16	23	19	13	17	14	12	3	4	6	11
4	3	1	-2	-7	-11	-6	-7	-5	-2	-4	-9	-8
-7	-10	-4	-2	-9	-11	-5	0	-3	-9	-3	-1	-1
1	3	2	-1	-3	-4	-5	-5	-9	-10	-12	-9	-6
-3	-6	-5	-5	-7	-10	-7	-7	3	6	3	-5	-6
4	6	4	1	-3	-8	-13	-16	-15	-17	-15	-10	-9
-6	-6	-6	-6	-6	-7	-9	-10	-6	-6	-7	-6	-7
-12	-7	-7	-7	-6	-7	-8	-9	-7	-5	-5	-4	-4
6	6	5	7	9	12	11	10	9	7	7	6	4
8	3	8	8	6	6	7	4	5	5	6	9	11
11	12	14	14	14	17	17	18	17	18	17	15	18
-9	-14	-25	-34	-34	-32	-43	-48	-55	-55	-65	-58	-51
-29	-25	-22	-17	-17	-20	-24	-21	-17	-29	-34	-36	-29
-15	-12	-14	-16	-16	-18	-24	-26	-26	-23	-27	-33	-33
-10	-11	-12	-15	-10	-9	-6	-15	-13	-12	-10	-15	-22
-7	-8	-8	-11	-12	-6	-5	-13	-19	-22	-24	-20	-17
-9	-8	-16	-23	-18	-15	-10	-7	-16	-14	-16	-11	-8
0	-1	-0	-6	-9	-6	-9	-13	-15	-16	-14	-10	-6



PRINCIPAL MAGNETIC STORMS

JANUARY 1974

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	COMMENCEMENT hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	UT END HOUR
HD	7.6N	1	0337	SC	- 0.2	+ 8	- 2	--	-	--	--	--	--	--
HD	7.6N	8	1115	..	..	..	..	08(6)	5	3	180	16	10	23
HD	7.6N	14	0945	..	..	..	..	15(6) 16(5,6)	4	3	99	15	16	21
CO	64.6N	15	0913	SC*	+ 2	--	--	15(5)	7	195	1260	740	16	16
GU	4.0N	15	0912	..	..	..	..	15(05)	5	80	90	20	19	09
GN	43.3S	15	04--	..	..	..	..	15(5)	5	15	60	110	16	16
TO	46.7S	15	03--	..	..	..	..	15(5)	5	10	120	30	16	17
KG	56.5S	15	10--	..	..	..	..	15(5)	5	--	--	--	16	16
IR	41.0N	18	07--	..	..	..	..	18(6)	6	13	116	27	19	06
GN	43.3S	18	07--	..	..	..	..	18(6)	5	12	70	80	19	02
NE	55.1N	21	0245	..	..	..	..	21(3)	5	24	58	45	21	24
NE	55.1N	24	19--	..	..	..	..	25(3,5,6,7) 26(1,2) 27(1,2,4)	5	36	135	160	28	10
WI	54.2N	24	2259	SC	+ 3	+ 2.6	0	25(6,7,8) 26(1,7)	6	35	230	115	28	02
EB	43.9N	24	2300	SC	--	+ 1.3	+ 1.3	25(6,8)	6	208	137	64	28	06
TU	40.4N	24	23--	..	..	..	..	25(2,8) 26(1,7) 27(1,2)	5	14	125	25	30	05
AL	9.5N	24	2255	SC	- 0.4	9	- 3	25(5,6,7)	6	4	168	18	26	01
HD	7.6N	24	2300	..	..	..	..	25(5,6,7)	6	4	175	24	27	11
AN	1.5N	24	2255	SC	- 0.5	8	3	--	-	4	208	61	26	01
TV	1.1S	24	2255	SC	0.0	9	1.1	--	-	3	226	123	26	01
HR	33.7S	24	23--	..	..	..	..	25(5)	6	32	158	162	28	03
GN	43.3S	24	23--	..	..	..	..	25(7)	6	19	120	140	31	20
KG	56.5S	24	2259	SC	--	--	--	25(6,7)	8	--	--	--	27	12
CO	64.6N	25	04--	..	..	..	..	27(4)	7	192	1400	870	28	04
SI	60.0N	25	04--	..	..	..	..	25(3)	7	70	810	470	28	10
FR	49.6N	25	03--	..	..	..	..	25(8)	6	32	138	55	30	04
BD	49.0N	25	05--	..	..	..	..	26(1)	6	27	125	55	01	04
IR	41.0N	25	04--	..	..	..	..	25(6,7)	6	23	138	60	27	12
SJ	29.9N	25	0200	..	..	..	..	25(7)	5	8	121	34	26	03
SJ	29.9N	25	0758	SC	- 0.5	+12.2	+ 6	(Impulse within storm)	-	--	--	--	--	--
GU	4.0N	25	0028	..	..	..	..	25(03)	5	10	170	40	31	21
PM	18.7S	25	05--	..	..	..	..	25(3,5,6,7)	5	10	110	70	27	12
TO	46.7S	25	04--	..	..	..	..	25(3,6)	6	23	160	60	28	12
CO	64.6N	28	23--	..	..	..	..	29(4,5,6)	6	103	790	320	30	01
IR	41.0N	28	15--	..	..	..	..	29(6)	6	18	106	27	29	21

Reports were received from the following observatories:

College Sitka, Newport Witteveen, Fredericksburg Boulder, Ebro Irkutsk, Tucson San Juan, Alibag Hyderabad, Guam Annamalainagar, Trivandrum Apia, Port Moresby Hermanus, Gnangara Toolangi Port-aux-Francais

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

JANUARY 1974

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc, si and bay-commencements are mean values. If given by ten or more stations they are underlined.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

24 2259 A: SO DB LM; B: LE ES EB? CI TL? SZ KG (bs: A: NU; B: KS - bp: A: FU - bps: A: IK PE; B: WN NI? MA)

Sudden impulses found in the magnetograms (si)

10 1534 A: LG LM; B: LE ES WN FU PE (ssc: A: MA; C: IK SZ)

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

03 1207 - 1221 SZ
06 1432 - 1456 SZ
12 1030 - 1035 EB?
13 0534 - 0546 SZ
15 1040 - 1106 SZ
18 0851 - 0904 SZ
23 1714 - 1724 TN (bp: B: LM)
30 0715 - 0722 SZ
31 0752 - 0803 SZ (si: B: WN)

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

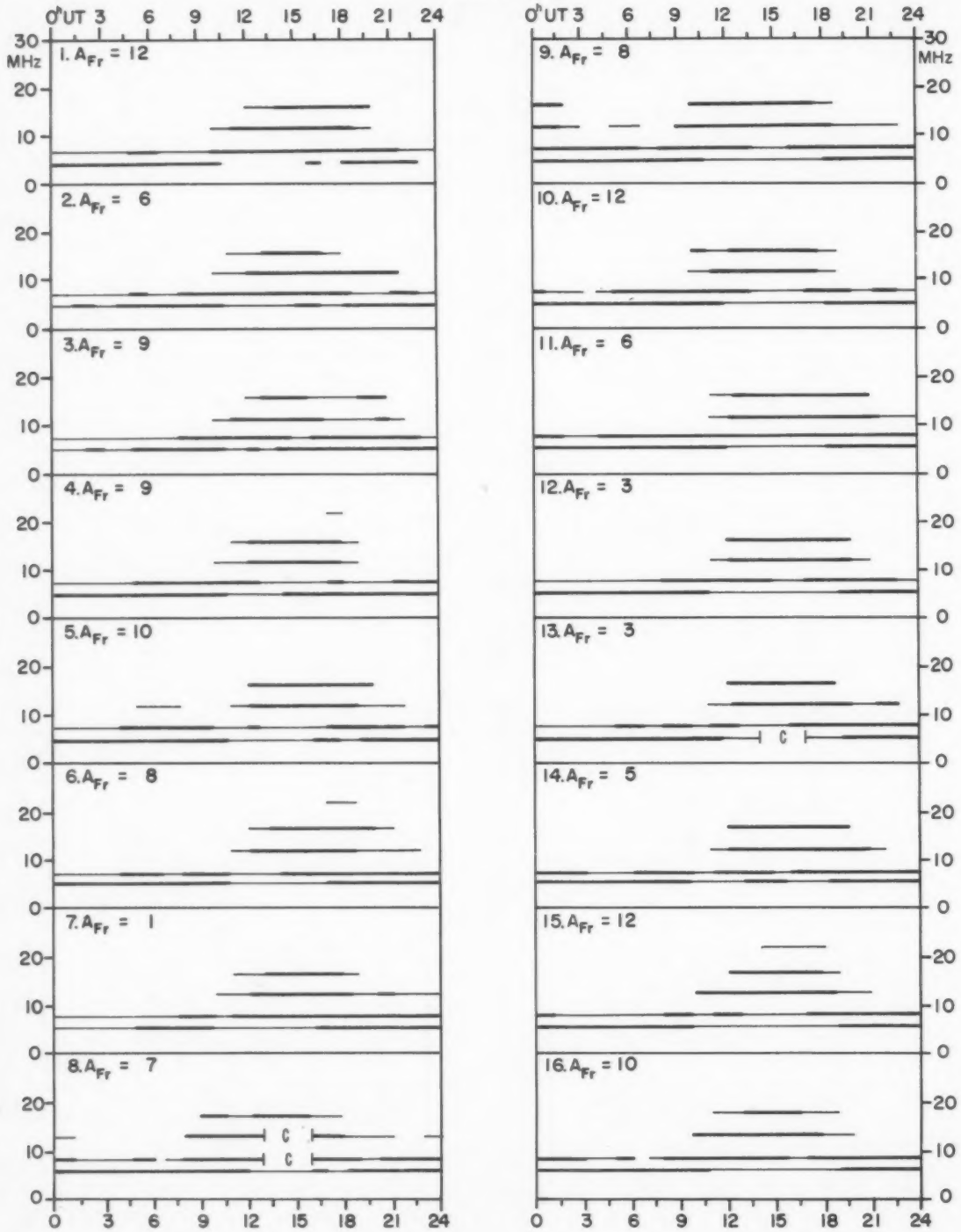
JANUARY 1974

North Atlantic

JAN. 1974	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								GEOMAGNETIC INDICES		
			6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				K_{FR}		A_{FR}
			00 TO 06	06 TO 12	12 TO 18	18 TO 24	02	08	14	20	HALF DAY (1)	HALF DAY (2)	OBSERVED
01	6-	5	6-	5+	7-	6-	5	5	5	5	3	3	12
02	6o	5	6-	5+	7-	6-	5	5	5	6	2	2	6
03	6o	6	6-	6o	7-	6o	6	6	6	6	2	2	9
04	6o	6	6-	6-	7-	6o	6	5	6	6	2	3	9
05	6+	6	6+	6+	6+	6+	6	6	5	5	3	2	10
06	6+	6	6+	6-	7-	7-	5	5	5	5	3	2	8
07	6+	6	6+	5+	7-	6+	6	6	6	7	0	1	1
08	6+	6	6+	5+	7-	6o	6	6	6	6	1	2	7
09	6o	6	6+	6o	6-	6-	6	6	6	6	2	2	8
10	6-	6	6-	6-	6+	6-	6	6	5	6	2	3	12
11	6o	6	6-	6+	6+	6+	6	6	6	6	2	1	6
12	6+	6	6o	7-	6+	6o	6	6	6	6	1	1	3
13	6+	6	6-	7-	7-	6+	6	6	6	6	1	1	3
14	6+	6	7-	6o	7-	6+	6	6	6	7	1	2	5
15	6+	6	7-	6+	6+	6o	6	6	5	5	2	3	12
16	6o	5	6-	7-	6o	6-	5	4	4	6	3	2	10
17	6+	5	6o	6+	7-	6o	5	5	5	6	3	2	15
18	6o	5	6+	6+	6-	6o	6	5	5	5	3	3	18
19	6-	5	5+	6o	6o	6-	5	5	5	5	2	2	7
20	6o	6	6-	6o	6+	6-	6	6	5	5	3	3	12
21	6o	6	6-	5+	6+	6o	6	5	5	6	(4)	2	14
22	6o	6	6o	6-	6+	6o	6	6	6	6	1	1	3
23	6o	6	7-	6-	6+	6o	6	5	6	6	1	0	3
24	6+	6	6+	6-	7-	6+	6	5	6	6	1	1	3
25	5+	6	6-	6-	5+	4+	6	5	5	5	(4)	(5)	31
26	5o	6	4-	4o	6+	6-	4	4	4	4	(4)	(4)	25
27	5-	6	3+	5-	6-	5+	4	4	4	4	(4)	(4)	27
28	5o	6	4-	5-	6o	6-	4	4	4	5	3	3	17
29	4+	6	5-	3-	5+	5+	4	4	4	5	3	3	17
30	5+	6	5-	4+	6o	6-	5	4	5	6	2	3	12
31	6-	6	6-	5+	7-	6-	5	5	5	6	3	2	13

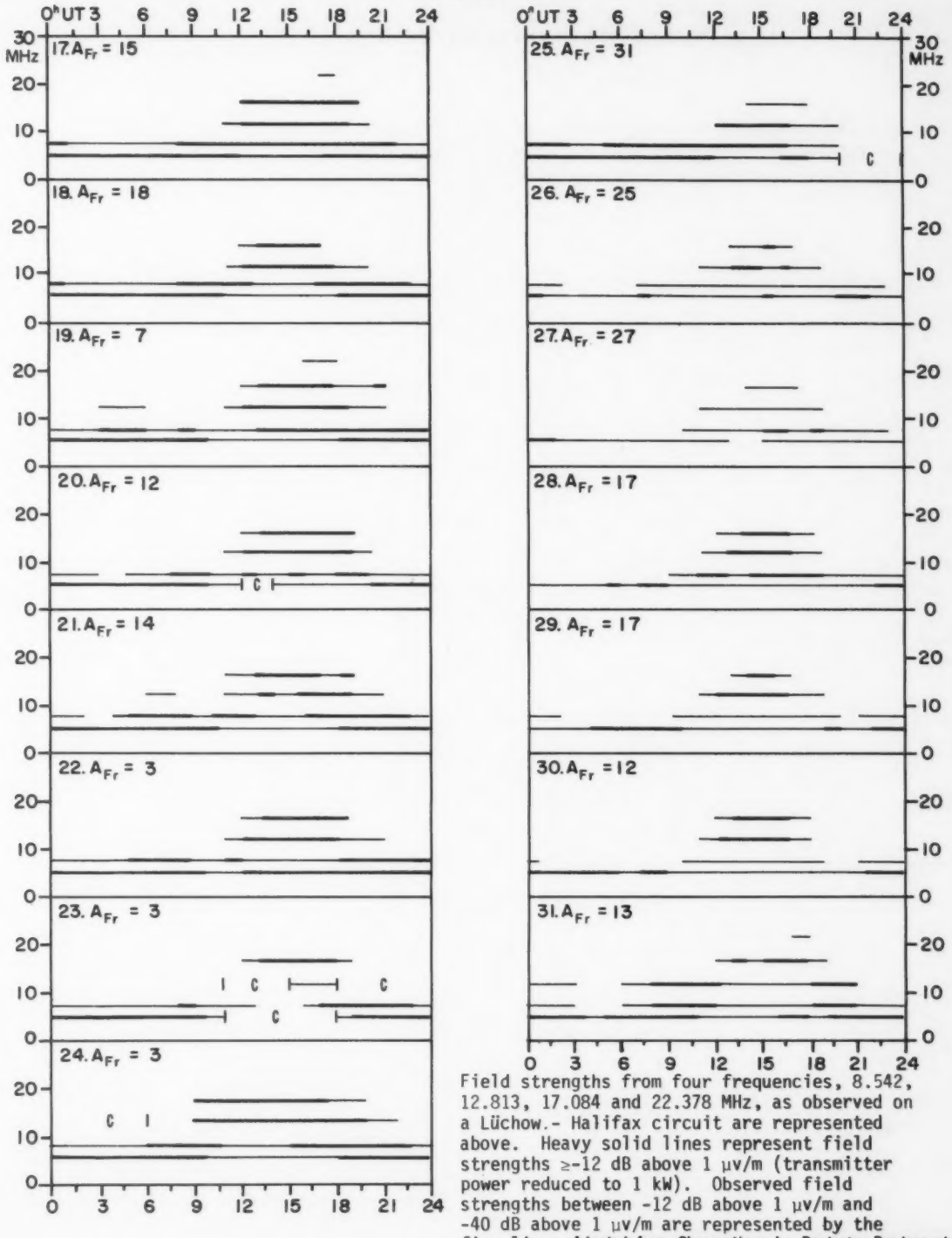
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

JANUARY 1974



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

JANUARY 1974



Field strengths from four frequencies, 8.542, 12.813, 17.084 and 22.378 MHz, as observed on a Lüchow.- Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line. **Adapted from Observations by Deutsche Bundespost**

RADIO PROPAGATION QUALITY INDICES

JANUARY 1974

Calculated from the records of four frequencies
on the circuit Lüchow - Halifax (Germany - Canada)

Date	Day	Night	D+N
1	4.9	4.1	4.4
2	4.9	4.0	4.2
3	5.7	4.8	5.0
4	4.8	4.7	4.5
5	4.7	4.6	4.5
6	5.2	3.9	4.3
7	5.7	5.8	5.5
8	4.8	6.8	5.5
9	5.4	4.6	4.8
10	4.8	5.0	4.7
11	6.6	4.8	5.4
12	5.6	4.4	4.8
13	5.8	4.9	5.1
14	6.5	4.5	5.2
15	5.8	5.1	5.2
16	5.1	4.4	4.5
17	5.9	4.4	4.9
18	4.1	4.2	4.0
19	5.1	3.8	4.2
20	3.8	3.9	3.7
21	4.9	4.2	4.3
22	5.1	4.3	4.5
23	4.8	5.1	4.7
24	5.3	5.3	5.0
25	3.9	2.6	3.0
26	2.8	2.0	2.3
27	1.4	2.0	1.6
28	3.5	2.9	3.1
29	3.1	2.8	2.8
30	3.1	4.1	3.4
31	4.3	3.2	3.6

USCOMM-NOAA-ASHEVILLE--3-29-74-1125

AMERICAN REVOLUTION BICENTENNIAL
1776-1976